

Final

ENVIRONMENTAL ASSESSMENT

Hawaii PPV Housing Phase 4
Marine Corps Base Hawaii

Naval Facilities Engineering Command Pacific
19 JULY 2007

**DEPARTMENT OF DEFENSE
UNITED STATES MARINE CORPS**

**FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR ENVIRONMENTAL ASSESSMENT (EA)
FOR HAWAII PPV HOUSING PHASE 4, MARINE CORPS BASE HAWAII**

Pursuant to the Council on Environmental Quality (40 Code of Federal Regulations, Parts 1500-1508) implementing the National Environmental Policy Act of 1969 and Marine Corps Order (MCO) P5090.2A, the U.S. Marine Corps gives notice that an EA has been prepared and an Environmental Impact Statement is not required for the Hawaii PPV Housing Phase 4, Marine Corps Base Hawaii (MCBH).

Proposed Action: MCBH proposes to enter into a Public/Private Venture (PPV) (Hawaii PPV Housing Phase 4), effective through 30 April 2054, to privatize the remaining portion of MCBH-owned family housing at MCBH Kaneohe Bay on O'ahu and to demolish and replace historic housing units that may be eligible for listing on the National Register of Historic Places (NRHP).

The purpose of the action is to leverage private investment and private sector assets by entering into a PPV to provide quality living accommodations to MCBH families that enhances quality of life, morale, and retention. The action is needed due to a shrinking housing budget coupled with aging houses and an increasing backlog of maintenance and repair activities which makes it challenging for the Marine Corps to quickly provide quality housing for service members and their families.

Existing Conditions: The project area includes up to 1,142 family housing units at MCBH Kaneohe Bay with construction laydown areas, maintenance/warehouse areas, and beach trails. The housing units are located in three housing areas: Mololani (Capehart), Pa Honua 3, and a portion of Ulupa'u housing area. The 634 historic housing units in the Mololani (Capehart) housing area may be eligible for listing on the NRHP, as they were built as part of the nationwide Wherry and Capehart era of military family housing. The Mololani (Capehart) housing area also includes land within a high archaeological sensitivity zone that is part of a traditional Hawaiian burial ground.

Alternatives Analyzed: Alternatives considered include the Proposed Action, the Representative Renovation Alternative, and the No Action Alternative. The Proposed Action would convey title of up to 1,142 family housing units, and lease the associated land, to a PPV entity effective through 30 April 2054. Demolition, replacement, and maintenance of military family housing would be part of the Proposed Action. In accordance with the Programmatic Agreement anticipated to result from the National Historic Preservation Act (NHPA) Section 106 consultation process, all 634 historic housing units at the Mololani (Capehart) housing area would be demolished. The Representative Renovation Alternative would be identical to the Proposed Action, with one exception. To retain an example of the Capehart building style, one historic housing unit would be renovated in the Mololani (Capehart) housing area. The No Action Alternative would be similar to the action alternatives, in that the housing units would eventually be demolished and replaced, or renovated, but MCBH would not enter into a PPV and would continue managing housing areas using traditional military construction procedures.

Environmental Effects: The Proposed Action may have adverse effects on 634 historic housing units proposed for demolition and on archaeological sites resulting from proposed construction, repair, or maintenance activities. Treatment of historic housing units would be done in accordance with a 2004 Program Comment (a service-wide Section 106 Compliance Action) relating to the management of Wherry and Capehart era family housing. MCBH is complying with Section 106 of the NHPA by consulting with the Advisory Council on Historic Preservation, the State Historic Preservation Officer, the Historic Hawai'i Foundation, the Office of Hawaiian Affairs, and other Native Hawaiian organizations. Consultations under Section 106 of the NHPA are expected to conclude with the execution of a Programmatic Agreement, which will stipulate ways to minimize and mitigate the adverse effect on historic properties and archaeological sites. Impacts from the action alternative would be less than the Proposed Action, as one less historic housing unit would be demolished.

The Proposed Action and action alternative would have no significant impacts on natural resources, infrastructure, public health and safety, socio-economics/demographics, or public services. Implementation of the Proposed Action or action alternative would not create environmental health or safety risks that may disproportionately affect children or minority or low-income populations. MCBH has determined that the Proposed Action and action alternative would have no affect on Federally listed threatened or endangered species and would not have reasonably foreseeable direct or indirect effects on any use or resource in the coastal zone.

Finding: Based on information gathered during preparation of the EA, MCBH finds that the proposed Hawaii PPV Housing Phase 4, Marine Corps Base Hawaii will not significantly impact human health or the environment.

The EA addressing this action is on file and interested parties may obtain a copy from: Naval Facilities Engineering Command Pacific, 258 Makalapa Drive, Suite 100, Pearl Harbor, Hawai'i 96860-3134 (Attention: (b) (6)), telephone (808) 472-1396. A limited number of copies on compact disk are available to fill single copy requests.

17 Aug 2007

Date

(b) (6)

Colonel, U. S. Marine Corps
Commanding Officer, Marine Corps Base Hawaii

COVER SHEET

Proposed Action: Enter into a Public/Private Venture (PPV), effective through 30 April 2054, to privatize the remaining portion of MCBH-owned family housing at MCBH Kaneohe Bay on O'ahu and to demolish and replace historic housing units.

Type of Document: Environmental Assessment (EA)

Lead agency: Marine Corps Base Hawaii (MCBH)

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This Environmental Assessment was prepared in accordance with the National Environmental Policy Act of 1969 (42 United States Code §4321, *et seq.*) as implemented by the Council on Environmental Quality regulations (40 Code of Federal Regulations §1500-1508) and Marine Corps Order (MCO) P5090.2A, Environmental Compliance and Protection Manual, dated 10 July 1998.

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The Proposed Action and action alternative would have no significant impacts on natural resources, infrastructure, public health and safety, socio-economics/demographics, or public services. Implementation of the Proposed Action or action alternative would not create environmental health or safety risks that may disproportionately affect children or minority or low-income populations. MCBH has determined that the Proposed Action and action alternative would have no effect on Federally listed threatened or endangered species and would not have reasonably foreseeable direct or indirect effects on any use or resource in the coastal zone.

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ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing materials
AICUZ	Air Installation Compatible Use Zone
BAH	Basic Allowance for Housing
BWS	Board of Water Supply
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cm	centimeter
CNRH	Commander Navy Region Hawaii
CRM	Cultural Resources Manager
CWA	Clean Water Act
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
dB	decibels
dBA	decibel (A-weighted scale)
DBEDT	Department of Business, Economics, Development, and Tourism
DoD	Department of Defense
DOH	Department of Health (State of Hawaii)
DRMO	Defense Reutilization and Marketing Office
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency

ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FY	Fiscal Year
ha	hectare
HAR	Hawaii Administrative Rules
HAZMIN	Hazardous Material Minimization
HECO	Hawaiian Electric Company, Inc.
HIOSH	Hawaii Occupational Safety and Health
HRS	Hawaii Revised Statutes
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
IR	Installation Restoration
ISMS	Invasive Species Management Study
km	kilometer
kV	kilovolt
LBP	lead-based paint
Ldn	average day-night sound level
MCBH	Marine Corps Base Hawaii
MCDC	Mokapu Central Drainage Channel
MCO	Marine Corps Order
MGD	million gallons per day
MHPI	Military Housing Privatization Initiative
MILCON	military construction
MLD	million liters per day

msl	mean sea level
MWh	megawatt-hours
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAVFAC	Naval Facilities Engineering Command
Navy	Department of the Navy
NEPA	National Environmental Policy Act
NHL	National Historic Landmarks
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OPNAVINST	Office of the Chief of Naval Operations Instruction
OSHA	Occupational Safety and Health Administration
PA	Programmatic Agreement
PCB	polychlorinated biphenyl
PPV	Public/Private Venture
SHPO	State Historic Preservation Officer
USC	United States Code
UTS	Utility Technical Study
WMA	Wildlife Management Area
WRF	Water Reclamation Facility

CHAPTER ONE

PURPOSE OF AND NEED FOR ACTION

1.1 SUMMARY OF PROPOSED ACTION

Marine Corps Base Hawaii (MCBH) proposes to enter into a Public/Private Venture (PPV), effective through 30 April 2054, to privatize the remaining portion of MCBH-owned family housing on O‘ahu. The Proposed Action would involve demolition, replacement, and maintenance of family housing, including historic units, located at MCBH Kaneohe Bay (Figure 1). Activities would be designed, financed, and constructed by the PPV entity, which would offer the family housing units for rent to eligible service members.

1.2 PURPOSE OF AND NEED FOR ACTION

The purpose of the action is to leverage private investment and private sector assets by entering into a PPV to provide affordable, timely, and quality living accommodations for military service members and their families that enhance quality of life, morale, and retention. The need for the action is due to a shrinking housing budget coupled with aging houses and an increasing backlog of maintenance and repair activities which makes it challenging for the Marine Corps to quickly provide quality housing for service members and their families.

1.3 BACKGROUND

In 1996, Congress established the Military Housing Privatization Initiative (MHPI) as a tool to help the military improve the quality of life for its service members by improving the condition of their housing. The MHPI was designed and developed to attract private sector financing, expertise, and innovation to provide necessary housing faster and more efficiently than the traditional military construction (MILCON) process would allow. Under the authority of the MHPI, the Department of Defense (DoD) works with the private sector to revitalize, renovate, and construct military family housing using a variety of financial tools. Such tools include direct loans, loan guarantees, equity investments, and conveyance or leasing of land, housing, and other facilities.

As authorized by the MHPI, the Hawaii PPV Housing Program was established for the Department of Navy (Navy), which also includes the Marine Corps, in Hawai‘i. The program consists of four phases:

- Phase 1, for Commander Navy Region Hawaii (CNRH), includes approximately 1,948 housing units on O‘ahu (Halsey Terrace, Hukulani, McGrew Point, Moanalua Terrace, and Radford Terrace);

- Phase 2, for MCBH, includes up to 1,175 housing units at MCBH Kaneohe Bay, MCBH Camp Smith, and the MCBH Manana Family Housing Area;
- Phase 3, for CNRH, includes its remaining housing units (approximately 2,517 housing units) at 15 housing communities on O'ahu and one housing community on Kaua'i; and
- Phase 4, for MCBH, includes remaining MCBH-owned housing units (up to 1,142 housing units) at MCBH Kaneohe Bay.

Although the Hawaii PPV Housing Program for the Navy includes the Marine Corps, the Navy and Marine Corps PPV programs are essentially separate and distinct. CNRH and MCBH have separate series indentures, operations and management plans, funds management, and privatization representation. Also, in Hawai'i, CNRH is the land owner of the Navy housing areas and MCBH is the land owner of the Marine Corps housing areas.

This Environmental Assessment (EA) evaluates Phase 4 of the Hawaii PPV Housing Program for up to 1,142 MCBH housing units within three existing housing areas, along with the associated land and infrastructure. The housing units include 634 units that are eligible for listing on the National Register of Historic Places (NRHP) and one housing area within an archaeologically sensitive zone where human remains may be present.

1.4 RELEVANT ISSUES

In the process of preparing this EA, the following resources and conditions were identified as relevant:

- Cultural resources, due to the presence of historic housing units within one housing area, that is also within archaeologically sensitive zones where human remains may be present;
- Surface water quality and drainage that could be affected by runoff associated with construction and changes to surface drainage patterns;
- Threatened or endangered species in nearby and downstream habitat; and
- Public health and safety conditions associated with flood hazards, and with respect to Executive Order (EO) 11988 Floodplain Management.

Chapters 3 and 4 are organized to address the relevant resources and conditions listed above prior to addressing remaining resources in the project areas.

1.5 DECISIONS TO BE MADE

This EA is being prepared to evaluate the environmental effects of the Proposed Action and alternatives. As a consequence of this analysis, the decisions to be made include:

- The MCBH Commanding General will decide whether or not to enter into a PPV for the remaining 1,142 family housing units at MCBH that were not privatized in Phase 2 of the Hawaii PPV Housing Program.
- The MCBH Commanding General will decide whether to recommend issuance of a Finding of No Significant Impact (FONSI) or preparation of an Environmental Impact Statement (EIS).

1.6 REGULATORY OVERVIEW

Federal laws, associated consultations, and permits that may be relevant to implementing the Proposed Action are presented herein.

1.6.1 Laws

1.6.1.1 National Environmental Policy Act

This EA was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code (USC) §4321, *et seq.*) as implemented by the Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508) and Marine Corps Order (MCO) P5090.2A, Environmental Compliance and Protection Manual, dated 10 July 1998. This EA analyzes the potential impacts of the Proposed Action and reasonable alternatives and is intended to provide sufficient evidence and analysis for determining whether to prepare an EIS, a FONSI, or take no action.

1.6.1.2 National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966, as amended (16 USC §470), recognizes the Nation's historic heritage and establishes a national policy for the preservation of historic properties as well as the NRHP. Section 106 of the NHPA requires Federal agencies to take into account the effects of Federal undertakings on historic properties, such as the historic housing units within the project area, and affords the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. The Section 106 process, as defined in 36 CFR §800, provides for the identification and evaluation of historic properties, for determining the effects of undertakings on such properties, and for developing ways to resolve adverse effects in consultation with consulting parties.

1.6.1.3 Native American Graves Protection and Repatriation Act

Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 USC §3011) provides for the protection and repatriation of Native American and Native Hawaiian human remains and cultural items discovered on Federal lands. NAGPRA provides a process for Federal agencies to return certain cultural items (i.e., human remains, funerary objects, sacred objects, or objects of cultural patrimony) to lineal descendants and culturally affiliated Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable cultural items, intentional and inadvertent discovery of cultural items on Federal lands, and penalties for noncompliance and illegal trafficking.

1.6.1.4 Coastal Zone Management Act

The purpose of the Coastal Zone Management Act (CZMA) of 1972 (16 USC §1451 *et seq.*) is to encourage coastal states to manage and conserve coastal areas as a unique, irreplaceable resource. To the maximum extent practicable, Federal actions affecting land/water use or coastal zone natural resources must be consistent with the enforceable policies of an approved state coastal zone management program. The CZMA requires a consistency determination from the Department of Business, Economic Development, and Tourism (DBEDT) for actions within the coastal zone, as defined by Hawaii Revised Statutes (HRS) §205A-1. Coastal Zone Management (CZM) consistency determinations are not required for actions on Federal property that would not have reasonably foreseeable direct or indirect effects on any use of or resource in the coastal zone.

1.6.1.5 Endangered Species Act

The Federal Endangered Species Act (ESA) of 1973 (16 USC §1531 *et seq.*) establishes a process for identifying and listing threatened and endangered species. It requires Federal agencies to carry out programs for the conservation of Federally listed endangered and threatened plants and wildlife and designated critical habitats for such species, and prohibits actions by Federal agencies that would likely jeopardize the continued existence of those species or result in the destruction or adverse modification of designated critical habitat. Section 7 of the ESA requires consultations with Federal wildlife management agencies on actions that may affect species or designated critical habitat. Section 9 of the ESA prohibits the “taking” (through harm or harassment) of endangered species without an agency-issued permit.

1.6.1.6 Clean Water Act

The Clean Water Act (CWA) of 1977, as amended (33 USC §1251 *et seq.*), is the major Federal legislation concerning improvement of the nation's water resources. The CWA amended the Federal Water Pollution Control Act and requires Federal agency consistency with State nonpoint source pollution abatement plans. Amended in 1987, the CWA strengthens enforcement mechanisms and regulations for stormwater runoff, providing for the development of industrial and municipal wastewater treatment standards, and a permitting system to control wastewater discharges to surface waters. Related permits include the National Pollutant Discharge Elimination System (NPDES) permit.

1.6.1.7 Clean Air Act

The Clean Air Act (CAA) and amendments (42 USC §7401 *et seq.*) is the comprehensive Federal law that regulates air emissions from area, stationary, and mobile sources. This law authorizes the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. Pursuant to the CAA and amendments, State-operated permit programs serve to control emissions. In Hawai'i, the State operating permit program is implemented by the State of Hawaii Department of Health (DOH) and emissions of regulated air pollutants within the state may be subject to permitting as required under Hawaii Administrative Rules (HAR) 11-60.1.

1.6.1.8 Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 (42 USC § 6901 *et seq.*) is the nation's primary law governing the disposal of solid and hazardous waste. RCRA amended the Solid Waste Disposal Act of 1965 and set national goals for: protecting human health and the environment from the potential hazards of waste disposal, conserving energy and natural resources, reducing the amount of waste generated, and ensuring that wastes are managed in an environmentally sound manner. RCRA gave EPA the authority to control hazardous waste from the "cradle-to-grave," including generation, transportation, treatment, storage, and disposal. RCRA also set forth a framework for the management of nonhazardous wastes.

1.6.1.9 Comprehensive Environmental Response, Compensation, and Liability Act

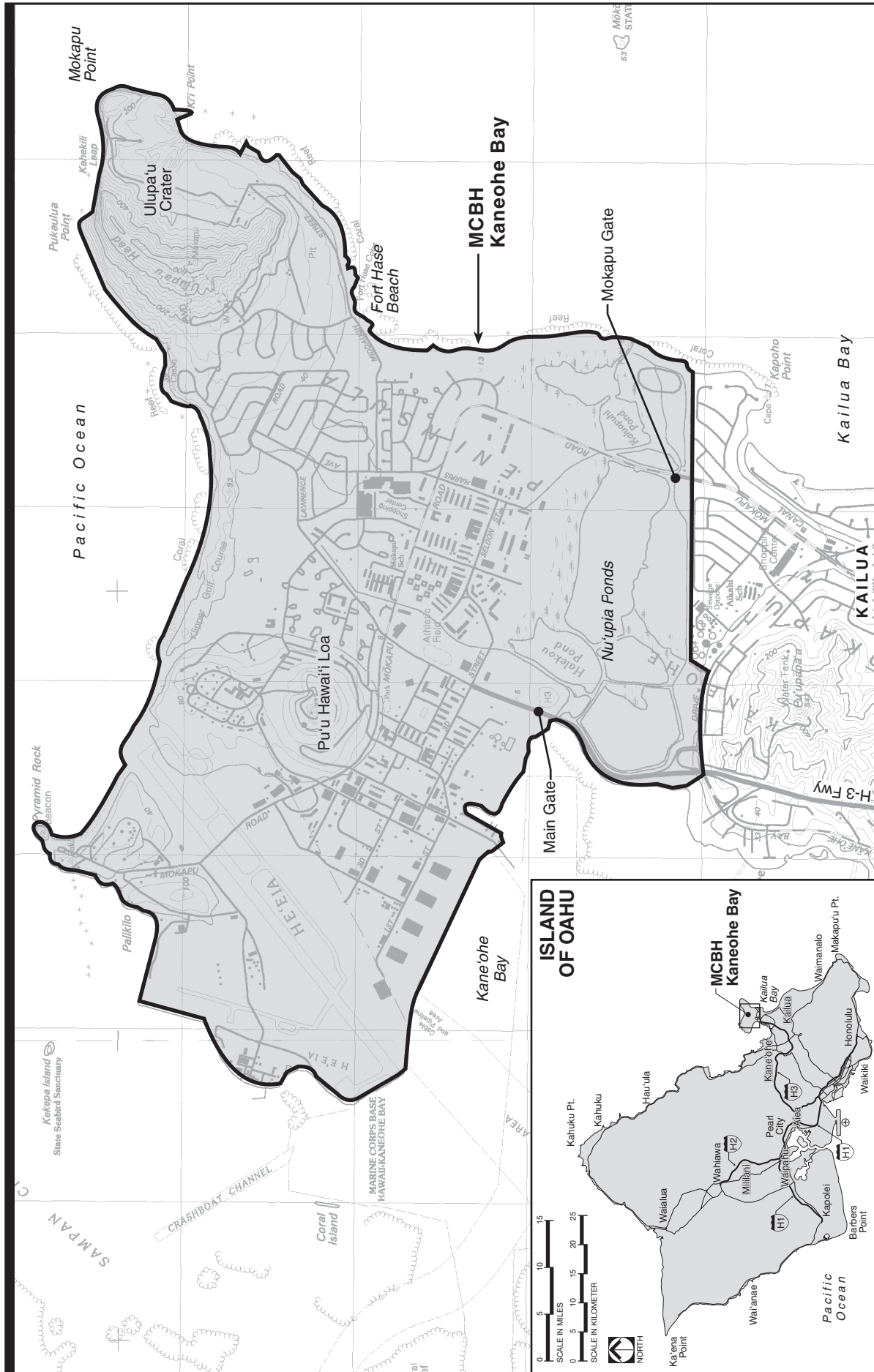
The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended (42 USC § 9601 *et seq.*), is commonly known as Superfund. This law created a tax on the chemical and petroleum industries and provided broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the

environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified.

1.6.2 List of Required Environmental Permits and Consultations

Government consultations and permits that may be required under the Proposed Action and alternatives, and identified during development of this document include:

- consultation in accordance with Section 106 of the NHPA with the ACHP and State Historic Preservation Officer (SHPO); and
- a NPDES construction storm water permit, from the DOH Clean Water Branch for discharge of storm water from construction activities that disturb 1.0 acre (0.4 hectares [ha]) or more of total land area.



CHAPTER TWO

ALTERNATIVES INCLUDING THE PROPOSED ACTION

This chapter describes the Proposed Action and action alternative that would fulfill the purpose and need of the action described in Section 1.2. Alternatives evaluated include the Proposed Action, the Representative Renovation Alternative, and the No Action Alternative, which are described in the following sections. Both action alternatives include entering into a PPV and represent different options to address the potential adverse effects on the historic housing units.

The No Action Alternative represents the status quo situation whereby MCBH would not enter into a PPV and would continue to manage the housing areas using traditional MILCON procedures.

A summary of the environmental impacts of the Proposed Action and alternatives is presented at the end of this chapter.

2.1 PROPOSED ACTION

Under the Proposed Action, MCBH would enter into a PPV, effective through 30 April 2054, to privatize the remaining portion of MCBH-owned family housing at MCBH Kaneohe Bay on O'ahu and to demolish and replace historic housing units that may be eligible for listing on the NRHP (Figure 1). The PPV would convey title of up to 1,142 existing military family housing units and lease the associated land at three family housing areas. The housing areas would include: Mololani (Capehart), Pa Honua 3, and a portion of Ulupa'u (Figure 2). The PPV entity would own, operate, manage, and maintain the existing housing units and any replacement housing units constructed (including site infrastructure and ancillary facilities located within the project area boundaries) for the term of the lease. Replacement housing would be constructed during the initial development period of the PPV award of this phase.

The Proposed Action would involve a combination of demolition and replacement construction, and maintenance of family housing, as described in Table 1. The specific combination is subject to change during negotiations between the PPV entity and MCBH. The PPV entity would design, finance, and implement the Proposed Action, and would offer these housing units to eligible service members at rental rates targeted at or below the member's Basic Allowance for Housing (BAH), including rent, personal property insurance, and reasonable utility consumption.

Table 1
Overall Plan for Housing Units
in Hawaii PPV Housing Phase 4 - Proposed Action^a

MCBH Housing Area	Year Built	Starting Inventory	Demolish and Replace ^b	Maintenance Only	Ending Inventory
Mololani (Capehart)	1959 to 1960	634	Demolish 634 Replace 689 ^c	0	689 ^c
Ulupa'u (portion)	1976	296	Demolish 296 Replace 16	0	16
Pa Honua 3	2007	212	0	212	212
TOTALS		1,142	Demolish 930 Replace 689	212	917

a After review of the Invitation for Proposal submittal from the PPV, the Proposed Action is subject to revision during negotiations between the PPV entity and MCBH.

b These units would be rebuilt using new construction.

c While the PPV Phase 4 ending inventory would be 689 units, the total Mololani (Capehart) ending inventory would include 54 units from PPV Phase 2, for a total of 743 units in this housing area. These 54 units were considered as part of the Ulupa'u housing area in the PPV Phase 2 EA and are not included in the PPV Phase 4 inventory.

The overall number of units replaced would be 225 units less than the starting inventory, and is consistent with findings of the housing requirement and market analysis.¹ The overall design of the project would not necessarily duplicate existing building footprints. Building footprints may be enlarged or moved. Site plans are not available, but site designs will be prepared in accordance with the CWA regulations and City and County of Honolulu ordinances and rules that address storm drainage and associated water quality. The ordinances and rules will ensure that patterns of flow and maximum peak flow rates of storm drainage, downstream drainage, and maintenance of water quality are evaluated, among other issues.

Interior streets may be realigned or removed, while major streets are expected to remain unchanged. Street segments within the project areas that will remain are shown in Figure 2 and include: Mokapu Road, Lawrence Road, Bancroft Drive, Daly Road, Pennsylvania Avenue, Middaugh Street, Dodson Street, and Harris Avenue.

Site improvements to be completed by the PPV entity include landscaping; installing electrical meters on housing units or adding new master meters; and replacing/upgrading utilities (sewer, water, electrical). Landscaping and grounds maintenance would be conducted for two beach access trails. Planned construction/renovations of ancillary facilities may include a warehouse, community centers, play fields, and swimming pools. Site improvements will be constructed in

¹ Robert D. Niehaus, Inc. 20 October 2005. *Marine Corps Base Hawaii, Oahu, Hawaii, 2005 Post-BRAC Recommendations Requirements Analysis*.

accordance with local, state, and national codes and design standards, and utility systems will be constructed in accordance with utility provider requirements.

The construction laydown areas and warehouse/maintenance areas (including Buildings 1505 and 4005) may be leased to the PPV entity for use as offices and storage for construction equipment and materials. The existing construction laydown areas and warehouse/maintenance areas located on the eastern side of MCBH Kaneohe Bay would be temporary and used to support construction activities during the initial development period (Figure 2). Buildings 1505 and 4005 may continue to be used by the PPV entity for the duration of the PPV.

The PPV entity, in coordination with MCBH, would manage the cultural resources within the project area by implementing measures to minimize and mitigate adverse impacts to historic housing and archaeological sites. The PPV entity will be a signatory to the Programmatic Agreement (PA) resulting from MCBH's NHPA Section 106 consultation process for cultural resources.

The Proposed Action would be conducted in a manner consistent with the MHPI of the 1996 Defense Authorization Act, as amended. The Proposed Action is an independent, separately funded project of the Marine Corps' PPV program for Hawai'i. The Marine Corps intends to utilize 10 USC §2871 *et seq.* to obtain safe, high quality, well-managed, affordable housing.

2.2 ALTERNATIVES

Consideration was given to two other alternatives:

- Representative Renovation Alternative – renovation of one historic housing unit to represent the historic buildings at Mololani (Capehart).
- No Action Alternative – no PPV. Housing would eventually be demolished and replaced, or renovated, but this would be implemented by MCBH through traditional MILCON procedures.

The differences between alternatives are summarized in Table 2 and described in the following sections.

Table 2
Comparison of Alternatives

MCBH Historic Housing Units	Alternatives		
	Proposed Action	Representative Renovation	No Action
634 units at Mololani (Capehart)	PPV entity would demolish the 634 units and replace them with 689 newly constructed units.	PPV entity would renovate one representative unit, demolish the remaining 633 units and replace them with 689 newly constructed units.	MCBH would renovate and/or demolish and replace with 689 units.

2.2.1 Representative Renovation Alternative

The Representative Renovation Alternative would be identical to the Proposed Action, except with regard to historic housing at Mololani (Capehart). The PPV entity would renovate one historic housing unit in accordance with a PA that would be developed for this action. Future use of the renovated unit would not be limited to housing. The remaining 633 historic housing units would be demolished and replaced with 689 newly constructed housing units. While the total number of housing units in the Mololani (Capehart) area would increase, the total housing inventory available to military families, considering three project housing areas would be the same as under the Proposed Action.

2.2.2 No Action Alternative

Under the No Action Alternative, MCBH would continue to own, operate, manage, and maintain the existing family housing units, and construct any replacement housing through the traditional MILCON process. With the shrinking housing budget, aging houses, and increasing backlog of maintenance and repair activities, there would not be affordable, timely, and quality living accommodations for military service members and their families. The family housing and quality of life for service members, which the DoD considers to be critical to retain personnel, would continue to degrade. Under this alternative the necessary improvements in family housing conditions and quality of life would not be provided.

2.3 ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION AND ALTERNATIVES ANALYZED

Table 3 presents a summary of the environmental effects of the Proposed Action and alternatives.

Table 3
Comparison of the Environmental Effects of the Alternatives

Resources/ Issues	Proposed Action	Representative Renovation Alternative	No Action Alternative
Cultural Resources	<p>Potential adverse effect on historic buildings due to proposed demolition of 634 historic housing units at Mololani (Capehart). Treatment of the historic housing would be in accordance with a 2004 Program Comment (a service-wide Section 106 compliance action) relating to management of Wherry and Capehart era family housing.</p> <p>Additionally, archaeological sites may be adversely affected during construction, repair or maintenance activities.</p> <p><u>Mitigation:</u> MCBH has initiated consultation with ACHP, SHPO, Historic Hawai'i Foundation, Office of Hawaiian Affairs, and other Native Hawaiian organizations; a PA will be executed that would stipulate measures to minimize and mitigate adverse effects and the PPV entity will be a signatory to the PA.</p>	<p>Potential adverse effect on historic buildings due to proposed demolition of 633 historic housing units at Mololani (Capehart) and renovation of one of the historic housing units. Treatment of the historic housing would be in accordance with a 2004 Program Comment (a service-wide Section 106 compliance action) relating to management of Wherry and Capehart era family housing.</p> <p>Additionally, archaeological sites may be adversely affected during construction, repair or maintenance activities.</p> <p><u>Mitigation:</u> MCBH would continue consultation in accordance with Section 106 of the NHPA and develop a PA, which the PPV entity would sign.</p>	<p>Similar to the action alternatives.</p> <p><u>Mitigation:</u> MCBH would carry out NHPA Section 106 consultations for specific actions as they arise.</p>
Surface Water and Drainage	<p>No significant impacts. Project housing areas would be designed in accordance with the CWA regulations and City and County of Honolulu ordinances and rules that address storm drainage and associated water quality. Patterns of surface water flow and maximum peak flow rates of storm drainage, downstream drainage, and water quality will be similar to pre-construction conditions. The PPV entity will obtain an NPDES construction storm water permit for discharge of storm water from construction activities that disturb one acre (0.4 ha) or more of total land area, which will include appropriate best management practices for the project areas.</p>		
Fauna	<p>No significant impacts. The grassed sections of the MCBH Kaneohe Bay project areas provide regular foraging habitat for migratory birds, such as the Pacific golden plover, and occasional foraging grounds for the endangered Hawaiian stilt. The use of best management practices during construction activities would minimize potential impacts. Potential displacement of foraging birds during construction activities would be minimal, short-lived, and not significant. The NPDES construction storm water permit, obtained by the PPV entity, for discharge of storm water from construction activities would include best management practices to prevent sediment and construction-related pollutants in discharges of storm water from entering habitat for endemic, endangered Hawaiian waterbirds, native and migratory waterfowl, and other aquatic life found in the Mokapu Central Drainage Channel (MCDC) and downstream wetlands. With respect to Section 7 of the ESA, MCBH has determined that "no effect" on Federally listed threatened or endangered faunal species will occur.</p>		

Resources/ Issues	Proposed Action	Representative Renovation Alternative	No Action Alternative
Flora	No significant impacts. No Federal- or State-listed threatened or endangered floral species have been identified in the project areas. Flora surveys will be conducted prior to preparation of the site plan, and if native species are found to have been used in landscaping the project areas, these plants will be handled appropriately. The MCBH Environmental Department would be consulted during the design phase for guidance in selecting appropriate plant species for landscaping. With respect to Section 7 of the ESA, MCBH has determined that "no effect" on Federally listed threatened or endangered floral species will occur.		
Geology, topography, and soils	No significant impacts. Ground surfaces disturbed during construction will be restored; any fill material used will be selected for use in accordance with the specifications provided by a certified soils engineer to ensure stability of the built environment without an increase in maximum peak flow rates of storm drainage; and use of soil or mulch will comply with best management practices to reduce risk of introducing invasive species, as specified in MCBH's Invasive Species Management Study.		
Groundwater	No impacts. Groundwater would not be exposed during construction activities and construction best management practices will prevent the release of petroleum product or other hazardous substances used during construction.		
Air Quality	No significant impacts. Construction-related impacts would be short-term and temporary and comply with applicable HAR. No net increase in mobile source emissions as family housing inventory will decrease by 225 units. While an indirect impact on air quality would occur from the additional air emissions associated with electrical power generation, such impacts will not be significant given existing Federal and State permit requirements and emission controls for these stationary source facilities.		
Infrastructure			
Electrical	No significant impacts. The increase in electrical demand can be accommodated by MCBH, whose utility source is Hawaiian Electric Company, Inc. (HECO).		
Potable Water	No significant impacts. There would be a reduction in the number of family housing units.		
Wastewater	No significant impacts. There would be a reduction in the number of family housing units.		
Solid Waste	No significant impacts. Construction and demolition waste would be recycled to the extent practicable. With a reduction in the number of family housing units, no significant changes in municipal solid waste are expected.	No significant impacts. Similar to Proposed Action, but slightly less construction and demolition waste would be generated as one less housing unit would be demolished.	Similar to the action alternatives.
Roads and Traffic	No significant impacts. During construction, traffic controls and MCBH gate security notification of periods of heavier activity will be implemented. With a reduction in the number of family housing units, a proportional reduction in housing-related traffic is expected.		
Public Health and Safety associated with:			
Flood Hazards	No significant impacts. Existing housing units are outside of the identified floodplain. Site designs will be prepared in accordance with EO 11988 and City and County of Honolulu ordinances and rules that address flood protection.		

Resources/ Issues	Proposed Action	Representative Renovation Alternative	No Action Alternative
Hazardous Materials and Waste	No significant impacts. Construction activities, including demolition, would require handling and disposal of building materials in accordance with applicable Federal regulations and State rules. Contractors would be responsible for properly handling and disposing of contractor-generated hazardous waste.		
Noise	No significant impacts. During construction, potential noise impacts will be minimized by restricting construction work to daylight hours and limiting heavy equipment operations to late morning and early afternoon hours. Family housing units are located in Noise Zone 1 (less than 65 Ldn); after construction is completed, noise levels are expected to remain below 65 Ldn.		
Socio- Economics/ Demographics	No significant impacts. The planned reduction in housing units meets installation needs and does not adversely impact socio-economics or demographics.		
Public Services	No significant impacts. The planned construction/renovations of ancillary facilities such as a warehouse, community centers, play fields, and swimming pools would improve the capacity and quality of community facilities available to the resident military population.		

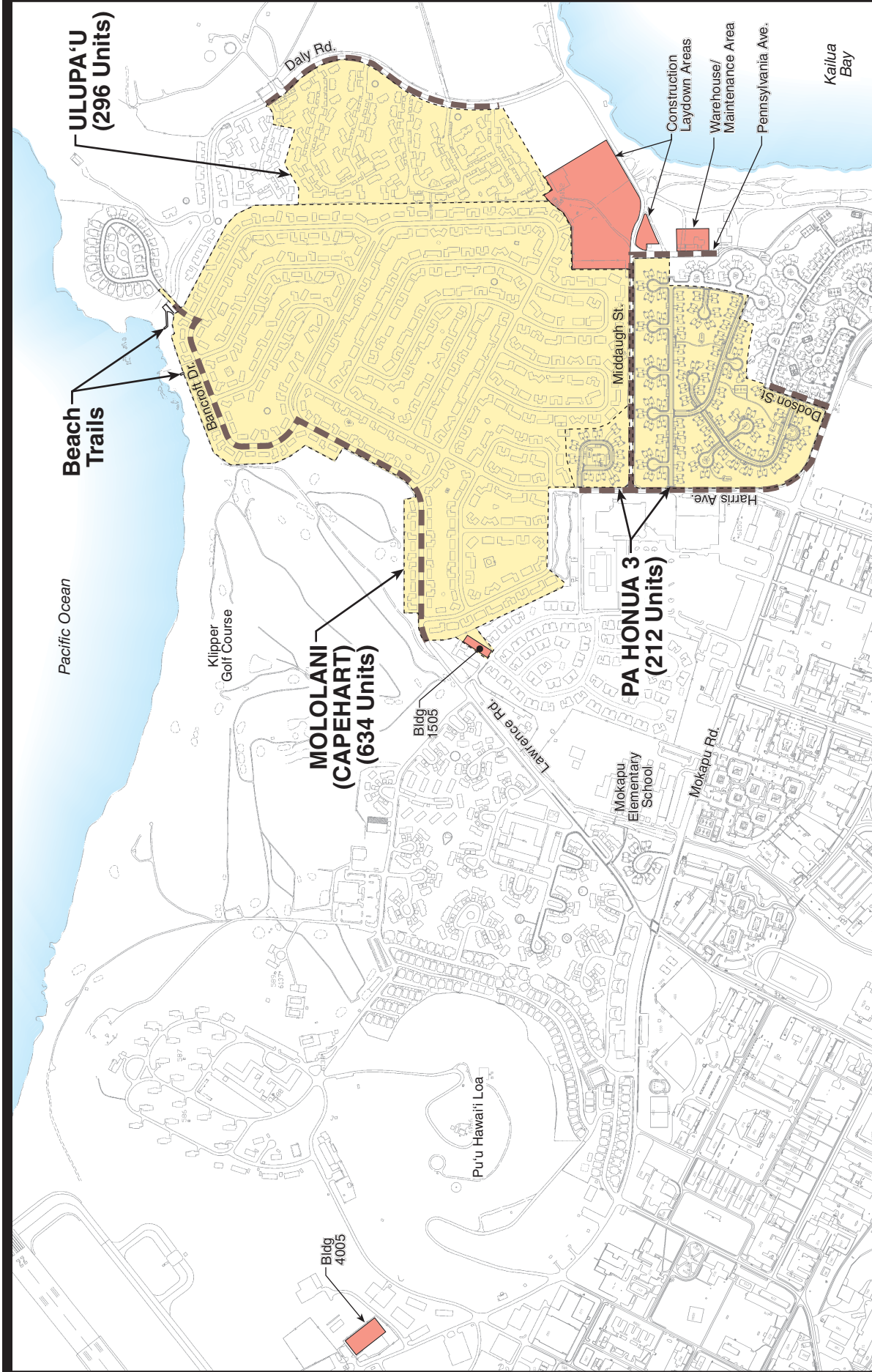
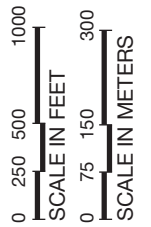
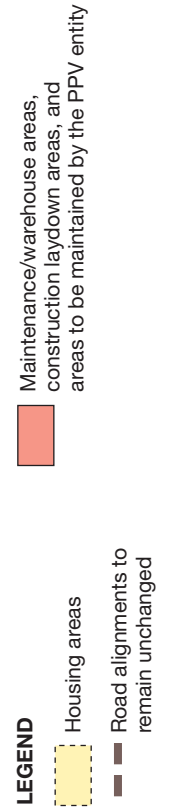


Figure 2
HOUSING AREAS

Environmental Assessment
Hawaii PPV Housing Phase 4



CHAPTER THREE

AFFECTED ENVIRONMENT

Chapter Three describes the affected environment within the project areas at MCBH Kaneohe Bay. The affected environment includes cultural resources, natural resources (surface water and drainage, fauna, flora, geology, topography and soils, groundwater, and air quality), infrastructure (electrical, potable water, wastewater, solid waste, and roads and traffic), public health and safety conditions (associated with flood hazards, hazardous materials and wastes, and noise), socio-economics/demographics, and public services. General setting information is provided below as background for orientation prior to presenting the affected environment in the following sections.

MCBH Kaneohe Bay is located on the island of O‘ahu in the Hawaiian Islands (Figure 1). The island of O‘ahu has a land area of approximately 604 square miles (972 square kilometers [km²]), and is the third largest but most populous island in the Hawaiian Islands. MCBH Kaneohe Bay consists of approximately 2,951 acres (1,194 ha) on Mokapu Peninsula on the eastern shore of O‘ahu, approximately 12 miles (19 kilometers) northeast of downtown Honolulu. MCBH Kaneohe Bay is bounded by the Pacific Ocean to the north, Kailua Bay to the east, private residential housing with a school and sewage treatment plant to the south, and Kane‘ohe Bay to the west. The two largest communities of windward O‘ahu, Kane‘ohe and Kailua, are located to the southwest and southeast, respectively.

The three family housing areas being considered under the Proposed Action and alternatives encompass approximately 235 acres (95 ha) or about eight percent of the total land area of the installation. The 1,142 units in these housing areas represent 47 percent of the total family housing units (including government, privatized, and leased units) on the installation. The housing areas are urbanized, with streets, utilities, and recreational amenities (Figure 2). The project area housing units were constructed between 1959 and 2007.

3.1 CULTURAL RESOURCES

The NHPA defines historic property as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places...” (16 USC 470w). For the purposes of this EA, the terms “historic properties” and “cultural resources” are used synonymously.

3.1.1 Historic Buildings

The Mololani (Capehart) housing area, constructed during the period between 1959 and 1960, was built as part of the nationwide Capehart Era of Military Family

Housing. Mololani (Capehart) consists of single-family and duplex units of wood construction totaling 634 units.

Wherry and Capehart housing was built in response to a shortage of family housing as service men and women returned home from World War II. In 1949 and 1955, Congress passed the Wherry Act and Capehart Act, which provided funding authorizations to address the military family housing shortage. As a result, several thousands of single-family and multi-family housing units were constructed nationwide from 1949 through 1962. These housing units were characterized by uniformity and standardized exterior design and materials. Landscaping, street layout and lot organization were similar to off-base civilian neighborhoods present in the community when the Wherry and Capehart era family housing was constructed.

In November 2004, the ACHP issued a Program Comment for Wherry and Capehart era family housing that recognizes that Wherry and Capehart era (1949-1962) family housing may be eligible for listing in the NRHP (Appendix A).

3.1.2 Non-Historic Buildings

Buildings in the Ulupa'u and Pa Honua 3 housing areas were constructed in 1976 and 2007, respectively. These buildings were determined to be ineligible for listing in the NRHP because they are not of exceptional importance for properties less than 50 years old.

3.1.3 Archaeological Sites

There have been numerous archaeological investigations at MCBH Kaneohe Bay, resulting in the identification of 52 archaeological sites. These sites consist of traditional Hawaiian habitation sites, fishponds, agricultural structures, and burial sites. As part of Section 106 compliance for previous and ongoing housing construction, several archaeological studies have been conducted in the Pa Honua housing area.¹

Inadvertent discoveries of isolated human remains have been encountered (mostly in disturbed contexts in sandy fill material) during construction and other types of ground disturbing activities in several areas at MCBH Kaneohe Bay. In the late 1950s, when much of the existing housing on base was constructed, sand was mined from the Mokapu Dunes, an area traditionally used by Hawaiians for human burials. The mined sand was used as fill material in utility trenches and under

¹ Hammatt, Hallett H. and B. Colin. 1995. *An Archaeological Assessment of 150.08 Acres for Proposed Family Housing Construction, Kane'ohe Marine Corps Base Hawai'i, Mōkapu Peninsula, Ko'olaupoko District, Island of O'ahu*. State Inventory Report No. O-01433.

Allen, J. and R. Drolet. 1998. *Archaeological Reconnaissance, Subsurface Testing, and Sampling for Revitalization/Replacement of 230 Dwelling Units for Family Housing Quarters, U.S. Marine Corps Base Hawaii, Kaneohe Bay, O'ahu Island, Hawai'i*. Honolulu: Ogden Environmental and Energy Services Co., Inc.

house foundations throughout the base. For this reason, isolated human bones are occasionally encountered during excavation of utilities and housing areas.

Several of the housing areas and a construction laydown area are located in the vicinity of archaeological sites.

Mololani (Capehart): Mololani (Capehart) borders the eastern edge of the Mokapu Dunes, now known as, the Mokapu Burial Area, Site 1017. Site 1017 is listed on the NRHP and is the location of a traditional Hawaiian burial ground from which close to 1,600 human burials have been recovered. There is a likelihood human remains could be found in this area. Due to the proximity of the site to the housing area, a portion of Mololani (Capehart) that borders the coast is considered a high archaeological sensitivity zone.² This zone has a high level of potential for the presence of subsurface archaeological deposits associated with early coastal occupation.

Approximately eight housing units are situated within or on the boundary of Site 1017 as it is defined in the NRHP. However, nine additional units are located within the zone of high archaeological sensitivity that extends beyond the boundary of the site (Figure 3). In addition, two isolated discoveries of human remains have been reported in the Mololani (Capehart) housing area. These finds consisted of secondary deposits from sand fill.

Just north of Mololani (Capehart) several incomplete sets of human skeletal remains were encountered during construction of new housing units in the Kaluapuni (Pond Road) housing area. All but one set of remains were previously disturbed, likely during the construction of the neighborhood in the 1960s. Most of the remains were not found in dune deposits as was common burial practice for coastal settings. Rather, they lay in soil beneath a fill deposit associated with earlier house construction in the 1960s. More recently, additional remains have been encountered in the sandy matrix that forms the slope on the ocean side the new housing at Kaluapuni (Pond Road).

Pa Honua 3 and Ulupa'u: The Pa Honua 3 and Ulupa'u housing areas are located in areas designated as a low archaeological sensitivity zone in the MCBH ICRMP. This zone has a low potential for the presence of subsurface archaeological deposits.

Construction Laydown Area: One area proposed for use as a construction laydown area includes land designated in the MCBH ICRMP as a high archaeological sensitivity zone. This zone has a high level of potential for the presence of subsurface archaeological deposits associated with early coastal

² U.S. Army Corps of Engineers Honolulu Engineer District. May 2006. *Integrated Cultural Resources Management Plan (ICRMP) Marine Corps Base Hawaii, O'ahu, Hawai'i*.

occupations. Site 2886, located to the east, is a subsurface habitation deposit, which is largely intact.

3.2 SURFACE WATER AND DRAINAGE

Surface water associated with the project areas include:

- the Mokapu Central Drainage Channel (MCDC), located in the central part of the installation (Figure 4);
- the ponds/delineated wetlands at the Klipper Golf Course (through which the MCDC flows);
- the Percolation Ditch wetland, and the Motor Pool wetland; and
- the Pacific Ocean surrounding Mokapu Peninsula (Kane'ohe Bay and Kailua Bay) (Figure 1).

MCBH Kaneohe Bay receives approximately 40 inches (102 centimeter [cm]) of rainfall per year and is sometimes subject to extensive flooding. Drainage over the project area occurs primarily through overland flow and via man-made drainage systems consisting of ponds, box culverts, lines, and ditches that discharge to the surface waters listed above.

A significant hydrological feature in the project area and the Mokapu Central Watershed (which includes the Nu'upia Basin that consists primarily of the Nu'upia Ponds) is the Mokapu Central Drainage Basin. Approximately half of the project area lies within this basin. The Mokapu Central Drainage Basin collects and channels storm water flow to the MCDC. The MCDC is tidally influenced, runs parallel to Lawrence Road, and receives storm water runoff from the Mokapu Central Drainage Basin and transports it into Kane'ohe Bay via Nu'upia Ponds.

3.3 FAUNA

With the exception of the following endangered endemic waterbirds, no other Federal- or State-listed threatened or endangered fauna species have been identified in the housing areas of MCBH Kaneohe Bay: Hawaiian stilt or *ae'o* (*Himantopus mexicanus knudseni*), Hawaiian duck or *koloa moali* (*Anas wyvilliana*), Hawaiian coot or *'alae ke'oke'o* (*Fulica alai*), and Hawaiian moorhen or *'alae 'ula* (*Gallinula chloropus sandvicensis*).³ Although the housing areas have been urbanized, Hawaiian stilts occasionally forage in housing area grasses and Pacific golden plovers (an indigenous migratory species) regularly forage in these grasses.

³ Environmental Compliance & Protection Department, G4, Marine Corps Base Hawaii and Sustainable Resources Group Int'l, Inc. November 2006. *Final Marine Corps Base Hawaii Integrated Natural Resources Management Plan Update (MCBH INRMP) (2007-2011)*.

Nu'upia Ponds, an officially designated Wildlife Management Area (WMA), is located on the southern part of Mokapu Peninsula (Figure 4). Species observed along the riparian banks of the MCDL include the Hawaiian stilt and the following migratory species: ruddy turnstones or 'akekeke (*Arenaria interpres*), black-crowned night herons or 'auku'u (*Nycticorax nycticorax hoactli*), and wandering tattlers or 'ulili (*Heteroscelus incanus*).

3.4 FLORA

There are no natural occurrences of Federal- or State-listed threatened or endangered plant species at MCBH Kaneohe Bay.⁴ Areas around existing housing units, roadways, parking areas, and other residential areas consist primarily of introduced or alien species (plants brought to the islands by humans, intentionally or accidentally, after Western contact). Since 2001, following Federal directives and MCBH Integrated Natural Resources Management Plan (INRMP) guidance, native and Polynesian-introduced trees, shrubs, and ground cover species from a preferred list have been used in landscaping projects at MCBH Kaneohe Bay.

3.5 GEOLOGY, TOPOGRAPHY, AND SOILS

The project areas are urbanized with family housing units, streets, sidewalks, utilities, and other support facilities and structures. Grading and site preparation has occurred in the past, resulting in the current topographic profile of the project areas. A generalized soils map for project areas is shown on Figure 5 and a brief description of these soil types is provided in the following sections.⁵

The Mokapu Peninsula was formed by basaltic lava eruptions from four separate volcanic vents during the last period of volcanic activity on O'ahu. Major volcanic features of the peninsula include Pyramid Rock on the northwestern tip of the installation, Pu'u Hawai'i Loa in the central area, and Ulupa'u Crater on the northeastern tip. Following this volcanic activity, the peninsula was inundated by a rise in sea level, during which time an extensive coral reef was formed. As sea level retreated to its present level, beaches and sand dunes were formed from the deposition of calcareous sand by the prevailing tradewinds.

The topography in the vicinity generally slopes towards the Nu'upia Ponds (Figure 1). The topography slopes down to the southwest from Ulupa'u Crater, with a peak elevation of approximately 400 feet (122 meters) above mean sea level (msl). Slopes are steeper near the crater ridge, and become less steep in the Mololani (Capehart) housing area. At the Ulupa'u housing area elevations range between

⁴ Environmental Compliance & Protection Department, G4, Marine Corps Base Hawaii and Sustainable Resources Group Int'l, Inc. November 2006. *Final Marine Corps Base Hawaii Integrated Natural Resources Management Plan Update (MCBH INRMP) (2007-2011)*.

⁵ U.S. Department of Agriculture, Soil Conservation Service. August 1972. *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*.

160 and 20 feet (48.8 and 6.1 meters) above msl. At the Mololani (Capehart) housing area, elevations range from approximately 80 to 20 feet (24.4 to 6.1 meters) above msl. Slopes in the Pa Honua 3 housing area are relatively flat with elevations less than 20 feet (6.1 meters) above msl.

Soil erosion caused by heavy rainfall has affected some Mololani (Capehart) housing units. During storm events, soil carried by runoff is deposited around units.⁶

The following soil types were identified at the project areas.

Ewa Silty Clay Loam (EmA). The Ewa Series consists of well-drained soils in basins and on alluvial fans on O'ahu and Maui. They are nearly level to moderately sloping. Permeability is moderate. Runoff is very slow and the erosion hazard is no more than slight. This soil type occurs at the western end of Mololani (Capehart) housing area.

Keaau Clay (KmA). The Keaau Series consists of poorly drained soils on the coastal plains. Permeability is slow. Runoff is slow and the erosion hazard is no more than slight. The shrink-swell potential is high. This soil type was identified at the western end of Mololani (Capehart) housing area.

Makalapa Clay (MdB). The Makalapa Series consists of well-drained soils on uplands. They are gently sloping to moderately steep with slow permeability. Runoff is slow and the erosion hazard is slight. The shrink-swell potential is high. This soil type was identified at the Mololani (Capehart) and Ulupa'u housing areas.

Mamala Stony Silty Clay Loam (MnC). The Mamala Series consists of well-drained soils along coastal plains. Stones, mostly coral rock fragments, are common in the surface layer and throughout the profile. Permeability is moderate, runoff is very slow to medium, and the erosion hazard is slight to moderate. This soil type was identified at the Pa Honua 3 housing area, at the majority of the Mololani (Capehart) housing area, the southern corner of Ulupa'u housing area, and at the majority of the construction laydown areas.

Molokai Silty Clay Loam (MuC). The Molokai Series consists of well-drained soils on uplands. This soil type occurs on knolls and sharp slope breaks. Permeability is moderate, runoff is medium, and the erosion hazard is moderate. This soil type was identified at the northeastern corner of Mololani (Capehart) housing area and the northern end of Ulupa'u housing area.

⁶ Department of the Navy, Commander, Naval Facilities Engineering Command, Pacific. May 2007. *Draft Environmental Condition of Property to Support Hawaii Public-Private Venture Housing Phase 4 Marine Corps Base Hawaii Housing Areas: Hana Like, Mololani, Pa Honua 3, & Ulupau, Kaneohe Bay, Hawaii.* Prepared by Environmental Science International.

Jaucas Sand (JaC). The Jaucas Series consists of excessively drained calcareous soils that occur as narrow strips adjacent to the ocean. Permeability is rapid and runoff is very slow to slow. The water erosion hazard is slight while the wind erosion hazard is severe where vegetation has been removed. This soil type was identified at the northwestern end of Mololani (Capehart) housing area, the beach trails, and part of the construction laydown area.

Fill Land (FL). Fill land generally occurs adjacent to the ocean. It consists of areas filled with material dredged from the ocean or hauled from nearby areas, and general material from other sources. Fill land was identified at part of the construction laydown area.

3.6 GROUNDWATER

Water resources within the Hawaiian Islands include three main types of aquifer systems: (1) basal lens; (2) dike water; and (3) perched. The basal lens consists of fresh coastal groundwater that floats on the denser underlying salt water. Dike water systems are generally located at high elevations and comprise groundwater that is impounded between impermeable basaltic dikes. Perched groundwater systems are formed as isolated lenses of groundwater resting on a geologic layer such as clay.

Groundwater at Mokapu Peninsula is within a basal groundwater area that is brackish. Consequently, no deep water wells have been drilled at the peninsula and there are no potable water wells at MCBH Kaneohe Bay.⁷

3.7 AIR QUALITY

The climate of Hawai'i is mild maritime/tropical with relatively stable year-round temperatures.⁸ The Hawaiian Islands experience two seasons: "summer" (May to October) and "winter" (November to April). Summer is characterized by overhead sun, heat, and mild tradewinds, while winter has higher rainfall, cooler temperatures, and stronger tradewinds. The predominant wind direction at MCBH Kaneohe Bay is from the east-northeast at 10 knots (nautical miles per hour) and the mean annual rainfall is approximately 40 inches (102 cm).

The state of Hawai'i is in "attainment" of the NAAQS. Air pollutant emissions at MCBH Kaneohe Bay are primarily attributed to mobile sources (e.g., vehicles and aircraft) and stationary sources (e.g., generators) related to operations and training.

Radon testing was conducted at over 400 housing units at MCBH Kaneohe Bay, including Mololani (Capehart) and Ulupa'u housing areas. Results of the screening

⁷ State of Hawaii, University of Hawai'i at Hilo, Department of Geography. 1998. Edited by Sonia P., and James O. Juvik. *Atlas of Hawai'i, Third Edition*.

⁸ State of Hawaii, University of Hawai'i at Hilo, Department of Geography. 1998. Edited by Sonia P., and James O. Juvik. *Atlas of Hawai'i, Third Edition*.

showed that radon concentrations for these tested units were below the action level established by the EPA and Navy Radon Assessment and Mitigation Program.⁹ No radon test data for Pa Honua 3 housing area are available.

3.8 INFRASTRUCTURE

3.8.1 Electrical

MCBH Facilities purchases electricity from the Hawaiian Electric Company, Inc. (HECO) to provide electrical power to MCBH Kaneohe Bay. Electrical power is supplied via two 46 kilovolt (kV) transmission lines which feed into a transformer that steps the incoming voltage down to 11.5 kV. MCBH Kaneohe Bay owns and operates the electrical distribution systems and supplies electricity to the installation from four HECO substations. The project areas are served by either overhead or underground electrical lines. The total electrical usage for MCBH Kaneohe Bay in Fiscal Year (FY) 2006 was approximately 119,164 megawatt-hours (MWh). Of this total, 20,238.74 MWh were used by the project housing areas.¹⁰ This usage includes central air conditioning at the Ulupa'u housing area.

3.8.2 Potable Water

Potable water for MCBH Kaneohe Bay is purchased from the City and County of Honolulu Board of Water Supply (BWS) from the BWS Kapaa Reservoir. A 20-inch (50-cm) transmission main located along Mokapu Road delivers the BWS water to a main pump station on the installation. Potable water is distributed throughout the installation via a system of distribution lines which are owned, operated, and maintained by MCBH Kaneohe Bay. Five reservoirs, with a total capacity of 3.2 million gallons (12.1 million liters) provide water for MCBH Kaneohe Bay emergency fire flow and general backup purposes. The total potable water consumption at MCBH Kaneohe Bay for FY06 was 656 million gallons (2,483 million liters). Of this total, 346 million gallons (1,310 million liters) were used by the entire family housing area (approximately 2,425 units), including privatized units.¹¹

3.8.3 Wastewater

The MCBH Kaneohe Bay Water Reclamation Facility (WRF) is located at the southern end of the installation, near the main gate. The design capacity of the WRF, which receives both domestic and non-domestic wastewater flows, is 2.0 million gallons per day (MGD) (7.6 million liters per day [MLD]). The average daily wastewater flow at MCBH Kaneohe Bay is approximately 1.035 MGD (3.92 MLD),

⁹ Oak Ridge National Laboratory. 17 January 2007. *Radon Testing Report for the U.S. Marine Corps Base Hawaii Housing*. Prepared for Naval Facilities Engineering Command, Pacific.

¹⁰ Personal communication from MCBH Facilities on February 9, 2007.

¹¹ Personal communication from MCBH Facilities on February 9, 2007.

with 0.44 MGD (1.67 MLD) generated from the entire family housing area (approximately 2,425 units), including privatized units.¹² Treated effluent is pumped to a pump station in the City and County of Honolulu's Kailua Regional Wastewater Treatment Plant for deep ocean disposal through the County's Mokapu Ocean outfall. In FY06, 99.73 million gallons (377.48 million liters) of effluent from the WRF was reclaimed for irrigation of the Klipper Golf Course.

3.8.4 Solid Waste

Solid waste from the three project housing areas is collected by a private contractor who disposes of the materials off-base at the Waimanalo Gulch Landfill or the H-POWER facility for conversion into electric energy. In FY06, 4,376.94 tons of solid waste were generated at the entire MCBH family housing area, which includes housing at MCBH Kaneohe Bay, MCBH Camp H.M Smith, and MCBH Manana Family Housing Area.¹³

3.8.5 Roads and Traffic

The entrances to MCBH Kaneohe Bay are located along G Street (main gate) and on Mokapu Road (Figure 1). The main gate provides access to the H-3 Freeway, Kailua, and Kane'ohe. The Mokapu Gate provides access to Kailua. Primary access roads to the housing areas include: Mokapu Road, Lawrence Road, Bancroft Drive, Daly Road, Middaugh Street, and Harris Avenue (Figure 2).

No traffic data for the project areas are available.

3.9 PUBLIC HEALTH AND SAFETY

Potential hazards to public health and safety are associated with flood hazards, hazardous materials and wastes, and noise. Existing conditions are presented herein.

3.9.1 Flood Hazards

The Federal Emergency Management Agency (FEMA) identifies Special Flood Hazard Areas which are subject to inundation by the one percent annual chance flood (also known as the 100-year flood or base flood).¹⁴ The Special Flood Hazard Areas are divided into zones based on characteristics such as flood elevations and coastal zones. In the project area, two Special Flood Hazard Area zones (AE and VE) are identified (Figure 6). Zone AE areas are where base flood elevations (elevations to which the water surface would rise during a flood) have

¹² Personal communication from MCBH Facilities on February 9, 2007.

¹³ Personal communication from MCBH Family Housing Department on February 13, 2007.

¹⁴ Federal Emergency Management Agency (FEMA). 30 September 2004. *Flood Insurance Rate Map, Map Number 15003C0280F*.

been determined. The majority of the proposed construction laydown areas and the maintenance/warehouse area are within zone AE (Figure 6). Zone VE areas are in coastal flood zones with a velocity hazard associated with wave action (including tsunamis), and where the base flood elevations have been determined. A section of one proposed construction laydown area is within zone VE.

In addition to the Special Flood Hazard Areas, FEMA identifies another flood zone within the project areas. Zone D areas are where the flood hazards are undetermined, but possible. The project housing areas and beach trails are in zone D (Figure 6). No potential floodways have been identified in the Zone D areas.

In addition to the FEMA-identified flood hazard areas, MCBH conducted a study to refine the flood hazard areas associated with the MCDC, and establish more clearly defined limits of the 100-year flood zones (Figure 6).¹⁵ The limits of the 100-year flood zone are near the Mololani (Capehart) housing area, but do not include housing units.

3.9.2 Hazardous Materials and Wastes

Potential sources of hazardous materials and wastes may include hazardous building materials and former hazardous waste disposal operations and hazardous material practices.

Asbestos-containing materials (ACM) have been identified in the Mololani (Capehart) and Ulupa'u housing units.¹⁶ In addition, sections of water distribution lines within the housing areas were fabricated with ACM.¹⁷ ACM is not expected to be present in the Pa Honua 3 housing area because construction specifications state that ACM shall not be used.

Lead-based paint (LBP) has been identified in sampled housing units within the Mololani (Capehart) and Ulupa'u housing areas.¹⁸ LBP is not expected to be

¹⁵ Hawaii Pacific Engineers. February 2002, Rev. March 2003. *Final Submittal Mokapu Central Drainage Channel Study, Marine Corps Base Hawaii, Kaneohe Bay*. Prepared for Pacific Division Naval Facilities Engineering Command, Pearl Harbor Hawaii.

¹⁶ Department of the Navy, Navy Public Works Center, Energy Environmental Engineering Branch. August 1997. *Asbestos Activity Summary MCB Kaneohe*.

¹⁷ Hawaii Pacific Engineers. August 2000. *Utility Technical Study (UTS) for Potable Water System Marine Corps Base Hawaii, Kaneohe Bay, Hawaii*. Prefinal Submittal. As cited in *EA MCBH Kaneohe Bay*, August 2001.

¹⁸ Department of the Navy, Commander, Naval Facilities Engineering Command, Pacific. May 2007. *Draft Lead Survey Report/Lead Risk Assessment Report, Mololani Housing Area, Marine Corps Base Hawaii, MCBH Kaneohe Bay, Hawaii*. Prepared by Environmental Science International, Inc. and Department of the Navy, Commander, Naval Facilities Engineering Command, Pacific. May 2007. *Draft Lead Survey Report/Lead Risk Assessment Report, Central and South Portion Ulupau Housing Area, Marine Corps Base Hawaii, MCBH Kaneohe Bay, Hawaii*. Prepared by Environmental Science International, Inc.

present in the Pa Honua 3 housing area because construction specifications state that LBP shall not be used.

Pesticides (chlordane, heptachlor, and heptachlor epoxide) have been identified in the soil at the Pa Honua 3 housing area.¹⁹ Pesticides may be present in the other project housing areas.

Other potential hazardous building materials that may be in the housing areas include: arsenic in canec boards, polychlorinated biphenyl (PCB) light ballasts, and mercury-containing lamps.

Within the project areas, limited hazardous materials (e.g., paints) may be used by residents and household hazardous wastes may be generated by residents. To minimize waste, residents can bring reusable household products to the Hazardous Material Minimization (HAZMIN) Center located at Building 6407, so that materials can be used by others. Residents contact the City and County of Honolulu to arrange for proper disposal of household hazardous waste. Hazardous waste (e.g., lead paint) and appliances generated by the maintenance contractor for the project areas are properly disposed of by a third party. No industrial hazardous wastes are generated at the project areas.

In 1975, Congress established the Defense Environmental Restoration Program, which includes the Installation Restoration (IR) Program that provides guidance and funding for the investigation and remediation of hazardous waste sites at active military installations and facilities. IR Program sites at MCBH Kaneohe Bay do not include sites within the project areas. PCB soil and wipe samples, collected near one transformer in the Mololani (Capehart) housing area and near three transformers in the Ulupa'u housing area, did not contain PCB concentrations above the laboratory reporting limits.²⁰

3.9.3 Noise

The ambient noise environment of the housing areas at MCBH Kaneohe Bay is dominated by the sounds of wind rustling vegetation, motor vehicles on surface streets, and aircraft operations at the nearby runway. The runway, which is located on the western side of the installation, supports both transient and resident fixed-wing aircraft. Helipads supporting rotary wing aircraft are located near the runway and near a hanger. The Air Installation Compatible Use Zone (AICUZ) program was initiated, in part, by the DoD to recommend land uses compatible with aircraft operations. The Navy's AICUZ program is set forth in the Office of the Chief of

¹⁹ Kauai Environmental, Inc. February 2007. *Final Topsoil and Grass Sample Report Replacement of Family Housing Quarters Project Site, Marine Corps Base Hawaii, Kaneohe, Oahu, Hawaii*. Prepared for Metcalf Construction Co., Inc.

²⁰ Department of the Navy, Commander, Naval Facilities Engineering Command, Pacific. May 2005. *Final Environmental Baseline Survey to Support the Utility Privatization of Marine Corps Base Hawaii's Electrical Distribution and Wastewater Systems. MCBH Kaneohe Bay and Building 700 at MCBH Bellows, Oahu, Hawaii*. Prepared by Environet, Inc.

Naval Operations Instruction (OPNAVINST) 11010.36A and is applied at all Navy and Marine Corps airfields within the United States. For land use planning purposes, noise exposure levels are divided into three noise zones based on Ldn which is the day-night equivalent sound levels in decibels (dB). Ldn represents the 24-hour average sound level for an average day, with nighttime noise levels (10:00 PM to 7:00 AM) increased by 10 dB prior to computing the 24-hour average. Noise Zone 1 (less than 65 Ldn) is an area of no impact. Noise Zone 2 (65 to 75 Ldn) is an area of moderate impact where some land use controls are needed. Noise Zone 3 (75 Ldn and greater) is the most severely impacted area and requires the greatest degree of land controls. The project housing areas are located within Noise Zone 1 (Figure 7).

3.10 SOCIO-ECONOMICS/DEMOGRAPHICS

The 2006 programmed personnel loading at MCBH Kaneohe Bay was approximately 10,406 military personnel.²¹

The populations at MCBH installations are part of a larger military population in the state, which affects the demand for housing and other services. In 2005, the total Marine Corps and Navy personnel population in the state was approximately 18,460.²² Of the Marine Corps and Navy personnel stationed on O'ahu, there were approximately 17,560 dependents.

The DoD relies primarily on the private sector to house its military families. Because private sector housing on O'ahu cannot adequately accommodate the entire Marine Corps and Navy personnel assigned to the MCBH Kaneohe Bay, on-base family housing units are operated and maintained. Currently, there are approximately 2,425 family housing units (including government, privatized, and leased) at MCBH Kaneohe Bay with 492 families waiting and eligible to occupy on-base family housing.

Occupants of land around the project areas include military personnel training, working, or living at MCBH Kaneohe Bay.

3.11 PUBLIC SERVICES

Public services comprise a variety of different facilities, both on and off base. Police and fire protection, health care services, schools, and recreational amenities are considered public services although on-base services may not be accessible to the general public.

²¹ Department of the Navy Headquarters United States Marine Corps, Commandant of the Marine Corps (LF). 26 May 2006. Letter to Commanding General, Marine Corps Base Hawaii. *FY06 Facilities Support Requirements Planning Document*. Department of Navy Reference number 11011 LFL-2.

²² State of Hawai'i Department of Business, Economic Development, and Tourism (DBEDT). 2005. *State of Hawaii Date Book 2005*. <http://www.hawaii.gov/dbedt/info/economic/databook/db2005/>. Accessed February 5, 2007.

At MCBH Kaneohe Bay, police protection is provided by the Military Police Department. Fire protection services are primarily provided by the Federal Fire Department with two engine companies located on the installation. Health care services are provided by an on-base medical and dental clinic, and off-base facilities at Castle Medical Center and Tripler Army Medical Center. Mokapu Elementary School is located on base (Figure 2), and the public schools which serve the area include Kailua Intermediate School and Kalaheo High School. Recreational amenities on base include: athletic fields, baseball and softball diamonds, basketball/volleyball courts, a gymnasium, handball courts, a golf course, and a movie theater.

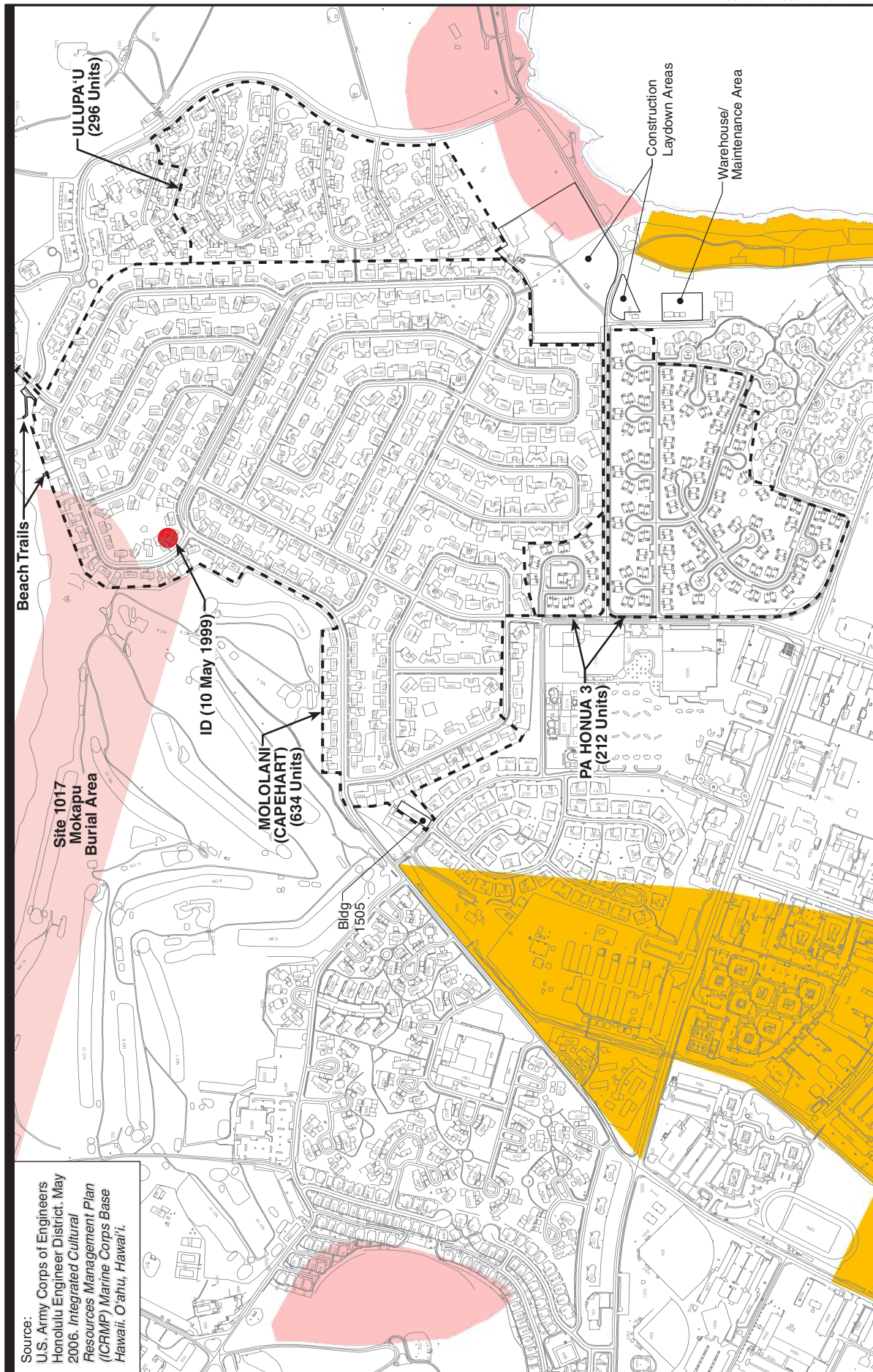


Figure 3
ARCHAEOLOGICAL SENSITIVITY ZONES

Environmental Assessment
Hawaii PPV Housing Phase 4

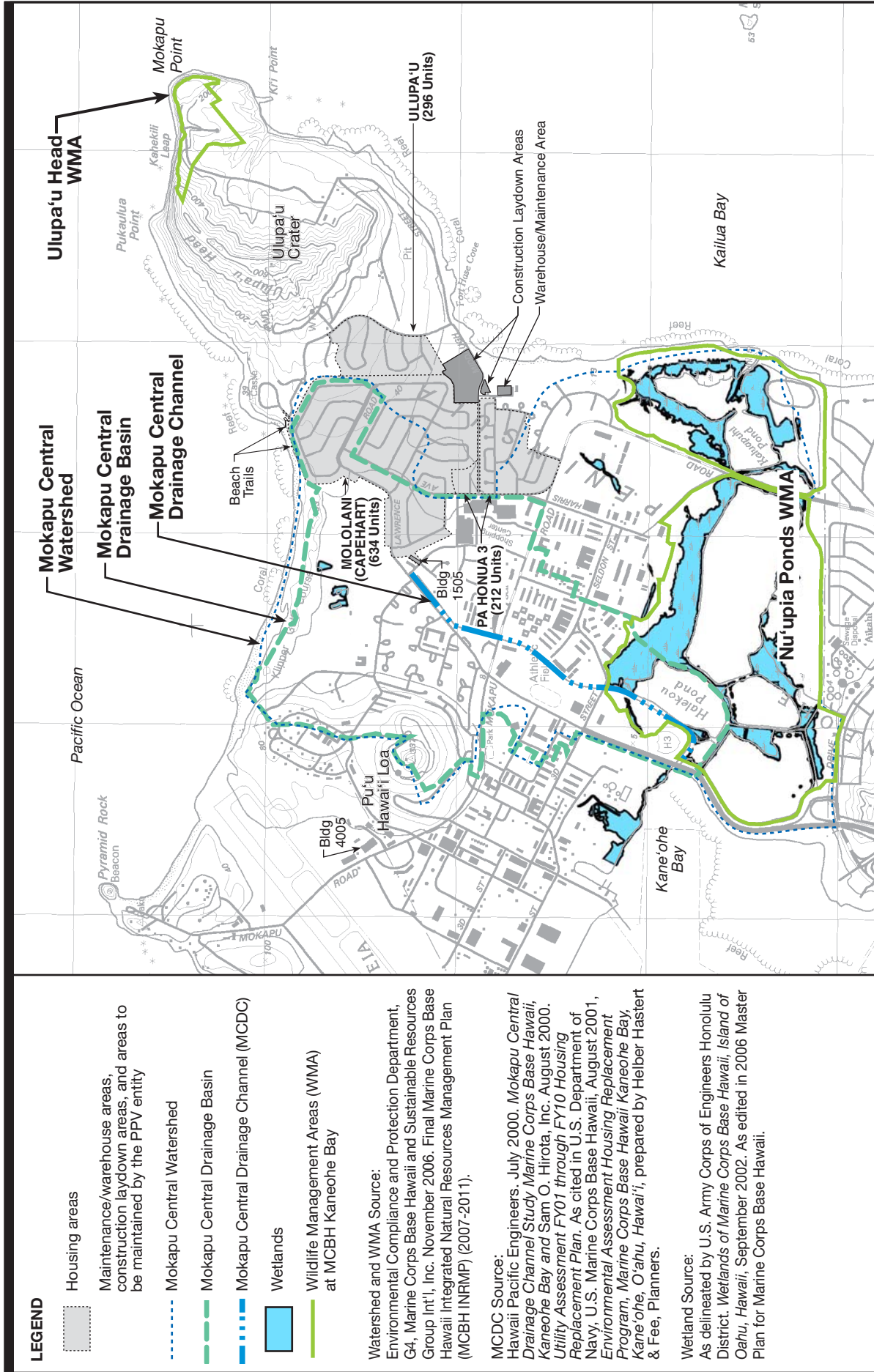


Figure 4
SURFACE WATERS AND WILDLIFE MANAGEMENT AREAS AT MCBH KANEOHE BAY
Environmental Assessment
Hawaii PPV Housing Phase 4



0 600 1200 2400
SCALE IN FEET

0 250 500 1000
SCALE IN METERS

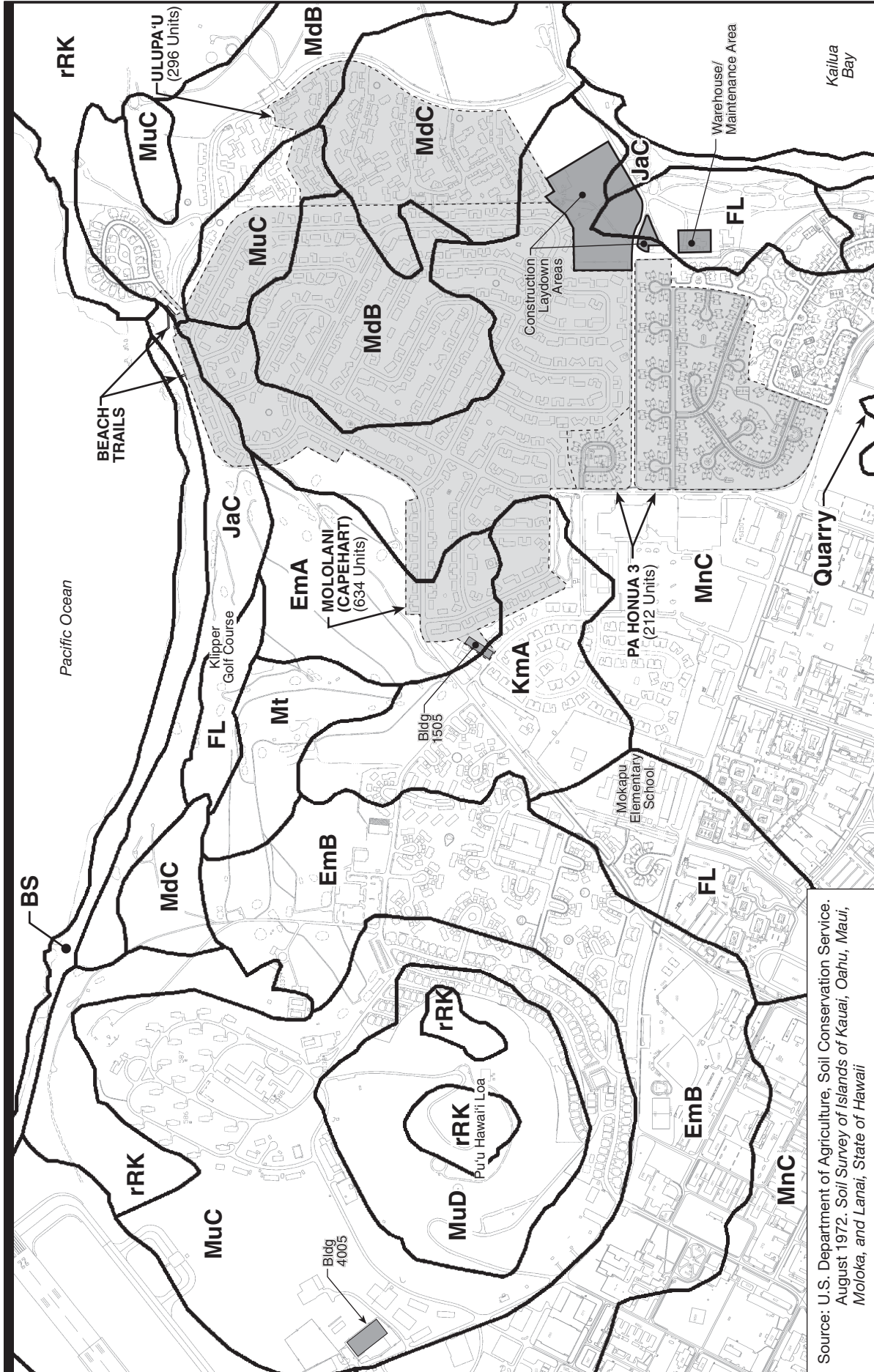


Figure 5
SOILS MAP

Environmental Assessment
Hawaii PPV Housing Phase 4

Maintenance/warehouse areas,
construction laydown areas, and
areas to be maintained by the PPV entity

LEGEND

Housing areas

Soil type areas
Section 3.5 provides descriptions
of soil types within project areas.

0 250 500 1000
SCALE IN FEET

0 75 150 300
SCALE IN METERS



Source: U.S. Department of Agriculture, Soil Conservation Service.
August 1972. Soil Survey of Islands of Kauai, Oahu, Maui,
Moloka, and Lanai, State of Hawaii

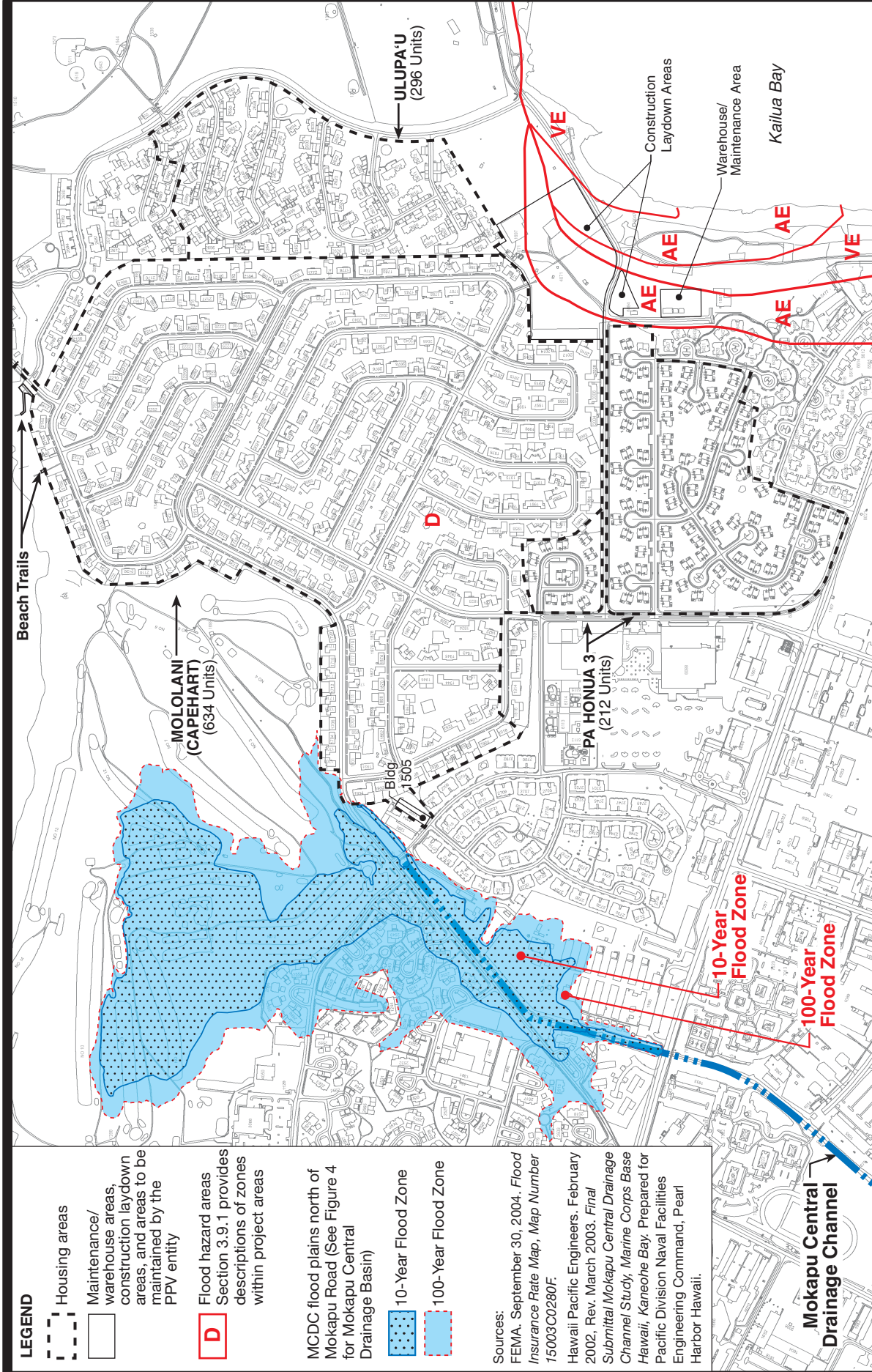


Figure 6
FLOOD HAZARD AREAS

Environmental Assessment
Hawaii PPV Housing Phase 4

Source:
MCBH Kaneohe Bay Air Installation
Compatible Use Zones, February 2003.

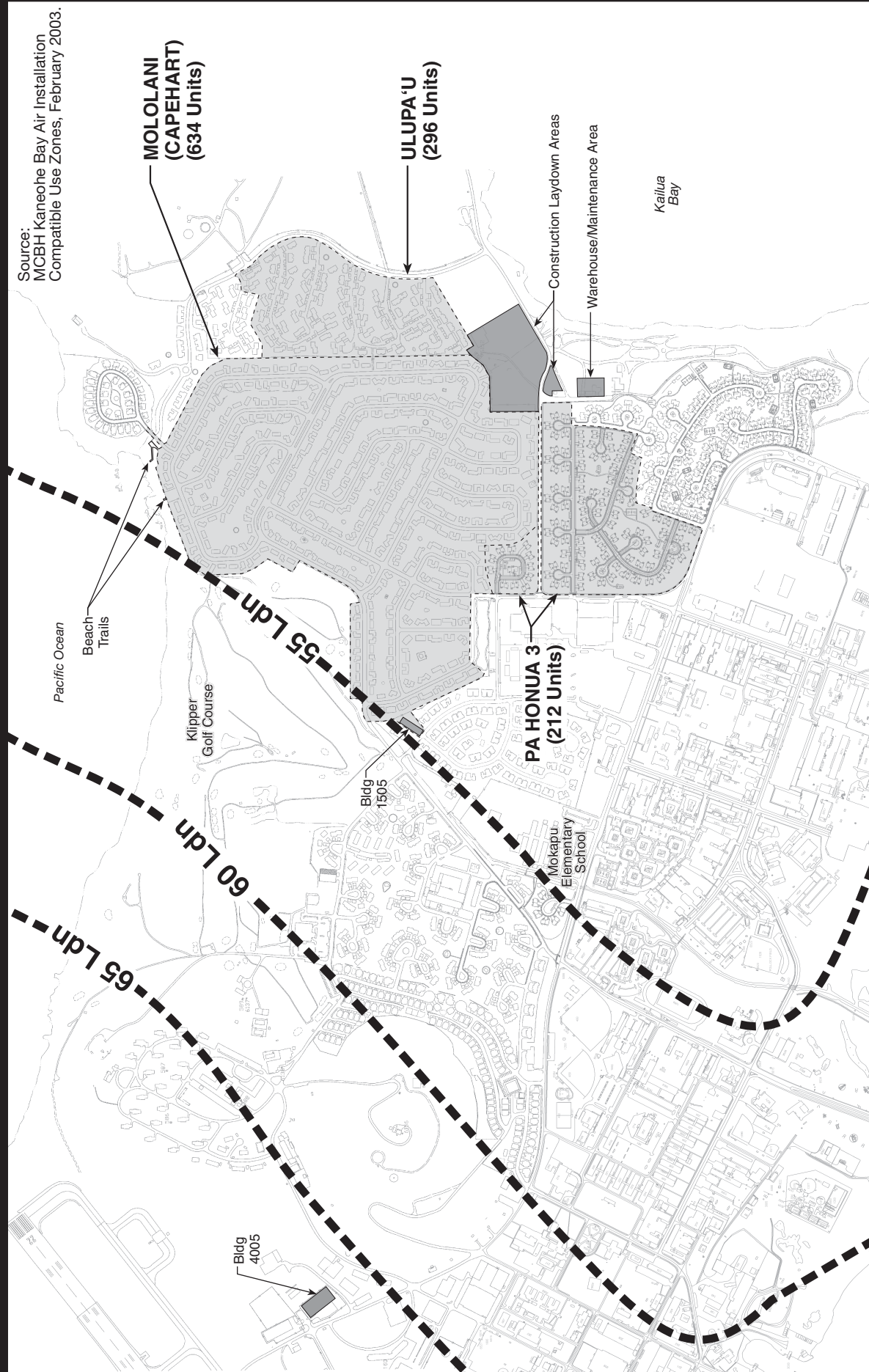


Figure 7
NOISE LEVEL CONTOURS
AT MCBH KANEOHE BAY
Environmental Assessment
Hawaii PPV Housing Phase 4

LEGEND

- Maintenance/warehouse areas, construction laydown areas, and areas to be maintained by the PPV entity
- Housing areas
- Noise level contours in Ldn (day-night equivalent sound levels in decibels)

SCALE IN FEET
0 300 600 1200

SCALE IN METERS
0 100 200 300 400 500



CHAPTER FOUR

ENVIRONMENTAL CONSEQUENCES

Chapter Four describes the environmental consequences of the Proposed Action, the Representative Renovation Alternative, and the No Action Alternative on the resources presented in Chapter Three. Direct, indirect, and cumulative impacts on relevant resources are identified. Direct impacts are a result of project implementation and may be short-term (temporary) or long-term. Indirect impacts are those caused by the action but occur later in time or are further removed from the action. Short-term impacts are interim changes in the local environment caused by project installation and would not extend beyond project associated activities; long-term impacts may result in irreversible damage to resources. Cumulative impacts, discussed in Section 4.12, are those resulting from incremental impacts of the Proposed Action when added to other past, present, and future actions within an identified region of influence.

4.1 CULTURAL RESOURCES

For the purposes of this analysis, significant cultural resources are those properties listed or eligible for listing in the NRHP. As defined in the implementing regulations for Section 106 of the NHPA, impacts of an undertaking on significant cultural resources are considered adverse if they “diminish the integrity of the property’s location, design setting, materials, workmanship, feeling, or association” [36 CFR § 800.9 (b)]. Examples of adverse effects include, but are not limited to, the following:

- Physical destruction, damage, or alteration of all or part of the property;
- Isolation of the property from, or alteration of the character of, the property’s setting when that character contributes to the property’s qualification for listing on the NRHP;
- Introduction of visual, audible, or atmospheric elements that are out of character with the property, or alter its setting;
- Neglect of a property resulting in its deterioration or destruction; and
- Transfer, lease, or sale of the property [36 CFR §800.5 (a)(1)].

4.1.1 Proposed Action and Representative Renovation Alternative

The proposed demolition and replacement of the Mololani (Capehart) housing units may have adverse effects on Wherry and Capehart era houses, which may be eligible for listing on the NRHP. In 2004, a Program Comment (a service-wide Section 106 compliance action) was issued by the ACHP relating to management of Wherry and Capehart era family housing (in Appendix A). The Program Comment covers the entire category of undertakings on Wherry and Capehart era

housing and demonstrates the Department of the Navy's compliance with Section 106 regarding the option of privatization and transfer out of Federal agency ownership, demolition, and demolition and replacement of Wherry and Capehart era housing, associated structures, and landscape features. Treatment of the Capehart era housing at Mololani (Capehart) would be in accordance with this ACHP Program Comment.

Pursuant to the Program Comment, the Navy recently conducted a context study to identify Wherry and Capehart era examples of particular importance for preservation consideration as mitigation for demolition. No examples in Hawaii were selected. The context study serves as mitigation for adverse effects to Capehart and Wherry housing nationwide. Additionally, per the Program Comment, those who manage and maintain this housing type are encouraged to consider *The Neighborhood Design Guidelines for Navy Wherry and Capehart Housing*, "in planning action that affect their Capehart and Wherry housing, associated structures, and landscape features" (Program Comment 2.b.iii).

The Representative Renovation Alternative would preserve one Mololani (Capehart) unit as an example of Wherry and Capehart era housing building style in Hawai'i. The unit would be selected by MCBH in consultation with SHPO and a historic architect as defined in the Secretary of the Interior Standards.

MCBH owns and is responsible for curation of the artifacts and associated records from NRHP-eligible or NRHP-listed archaeological resources recovered in the project area in accordance with 36 CFR Part 79, "Curation of Federally Owned and Administered Archaeological Collections."

Proposed construction activities within Mololani (Capehart) may adversely affect Site 1017, the Mokapu Burial Area. To mitigate potential adverse effects, MCBH is consulting with the following agencies and organizations to develop measures that would resolve adverse effects on cultural resources:

- ACHP,
- SHPO,
- Historic Hawai'i Foundation,
- Office of Hawaiian Affairs,
- Olds 'Ohana,
- Paoa/Kea/Lono 'Ohana
- Diamond 'Ohana,
- O'ahu Burial Council, and
- Keko'olani 'Ohana

NHPA Section 106 consultations have been initiated and are expected to conclude with the execution of a PA (Draft in Appendix A). The PA for the Proposed Action will include a number of stipulations to minimize and mitigate the adverse effects

on cultural resources while carrying out the privatization of housing at MCBH. Draft stipulations are summarized below and are subject to change until the PA is executed:

- All 634 housing units at Mololani (Capehart) will be demolished pursuant to the Program Comment.
- The Mololani (Capehart) units located within the high archaeological sensitivity zone, including the Mokapu Burial Area will not be replaced at their original locations. New units will instead be constructed elsewhere in the housing area outside of the high sensitivity zone.
- The Mololani (Capehart) area within the high archaeological sensitivity zone will be converted to green space for public use.
- For the Mololani (Capehart) housing units located within the high sensitivity zone, utilities and concrete foundations will be abandoned in place.
- Prior to ground disturbing construction work, the PPV entity will prepare an Archaeological Monitoring Plan, a draft of which will be submitted to SHPO and the MCBH Cultural Resources Manager (CRM) for review.
- The PPV entity's work dictated by the Archaeological Monitoring Plan will be carried out by, or under the direct supervision of, a Qualified Archaeologist.
- The PPV entity shall provide a Qualified Archaeologist to monitor ground disturbing activities during demolition of historic housing units.
- During ground disturbing activities, the PPV entity shall not intentionally or knowingly remove, disturb, or cause to be removed any archaeological resources, artifacts, human remains or objects ("Archaeological Discoveries").
- If a previously undiscovered Archaeological Discovery is made, the PPV entity shall immediately stop ground disturbing work in the immediate area and in the surrounding area to the extent further subsurface resources may reasonably be expected to be present, and shall notify the Navy and the MCBH CRM. The MCBH CRM or its designated Qualified Archaeologist shall inspect the resource, assess the significance of the Archaeological Discovery, and determine if further investigations are warranted. Work may continue in the project area outside of the newly discovered Archaeological Discovery.
- If the MCBH CRM determines that the Archaeological Discovery is eligible for listing in the NRHP, the MCBH CRM shall submit to the SHPO an assessment for the resources' eligibility and a treatment plan to avoid, minimize or mitigate any adverse effect on the Archaeological Discovery.

The SHPO shall provide comments to the MCBH CRM on the NRHP eligibility determination and the treatment to the MCBH CRM within two (2) business days of receipt of relevant documents. If no response is received from the SHPO, MCBH shall notify the PPV entity that it may resume work in the area of the Archaeological Discovery in accordance with the treatment plan.

- If the MCBH CRM determines that the Archaeological Discovery does not meet the NRHP Criteria of Eligibility, the PPV entity may resume work in the area of the Archaeological Discovery immediately upon written notice from MCBH after consultation with the MCBH CRM.
- If human remains, funerary objects, sacred objects, or objects of cultural patrimony ("Cultural Items") are encountered within the Lease area, work in the immediate vicinity as determined by the Company's Qualified Archaeologist or the MCBH CRM, will be halted and NAGPRA procedures will be followed. The PPV entity will notify the MCBH CRM who shall consult and notify the above-listed Native Hawaiian organizations, recognized by MCBH as having cultural affiliation to Cultural Items found at MCBH Kaneohe Bay. The MCBH CRM shall develop and implement a plan for the appropriate treatment of those Cultural Items in accordance with NAGPRA and the Archaeological Resources Protection Act, and their respective regulations.

Under the Representative Renovation Alternative MCBH would continue NHPA Section 106 consultation, as appropriate.

4.1.2 No Action Alternative

Under the No Action Alternative, MCBH would mitigate potential adverse effects on historic buildings through NHPA Section 106 consultations for specific actions, as they arise. The specific actions would be defined under traditional MILCON planning procedures.

4.2 SURFACE WATER AND DRAINAGE

No significant impacts to surface water or drainage are anticipated under the Proposed Action or alternatives. The project areas would be designed in accordance with the CWA regulations and City and County of Honolulu ordinances and rules that address storm drainage and associated water quality. Following the regulations of CWA and these City and County of Honolulu ordinances and rules will ensure that patterns of flow and maximum peak flow rates of storm drainage, downstream drainage, and water quality will be similar to pre-construction conditions.

During construction, areas of bare soil may be exposed and susceptible to erosion during storm events. To minimize erosion, City and County of Honolulu best

management practices will be followed, such as limiting the area of exposed soil. In accordance with 40 CFR 122, EPA storm water regulations, and the NPDES permit program, of which the State DOH has been delegated the authority to administer, the PPV entity will obtain an NPDES construction storm water permit for discharge of storm water from construction activities that disturb one acre or more (0.4 ha or more) of total land area. This will include appropriate best management practices for the project areas.

The PPV entity will comply with best management practices for maintaining or restoring watershed health listed in the MCBH INRMP and the MCBH Stormwater Management Plan.

4.3 FAUNA

Under the Proposed Action and alternatives, no significant impacts on fauna, including the endangered endemic Hawaiian silt, Hawaiian duck, Hawaiian coot, and Hawaiian moorhen, are anticipated. The grassed sections of the project areas provide regular foraging habitat for migratory birds, such as the Pacific golden plover, and occasional foraging grounds for the endangered Hawaiian stilt. The use of best management practices during construction activities would minimize potential impacts on the species and their habitat, and potential displacement of foraging birds during construction activities would be minimal, short-lived, and not significant.

Impacts to nearby native waterbird habitat, such as the MCDC or Nu'upia Ponds, from construction activities are not anticipated as the use of best management practices would prevent degradation of storm water quality. The NPDES construction storm water permit for discharges of storm water from construction activities, obtained by the PPV entity, will include best management practices to prevent sediment and construction-related pollutants in discharges of storm water from entering habitat for endemic, endangered Hawaiian waterbirds, native and migratory waterfowl, and other aquatic life found in the MCDC and downstream wetlands.

With respect to Section 7 of the ESA, MCBH has considered the Proposed Action and alternatives and has determined that "no effect" on Federally listed threatened or endangered faunal species will occur.

4.4 FLORA

Under the Proposed Action and alternatives, no significant impacts to flora are anticipated as no Federal- or State-listed threatened or endangered species have been identified in the landscaped project areas, which primarily consist of non-native grasses or introduced species. Flora surveys will be conducted prior to preparation of the site plan, and if native species are found to have been used in landscaping project areas, these plants will be handled appropriately.

In an effort to preserve existing mature trees within the project areas, all trees over a 6-inch (15-cm) breast height trunk diameter will be identified prior to completion of the site plan. Best management practices, such as buffers, will be used to ensure that trees identified for retention are protected. If trees can not be saved at existing locations, reasonable efforts will be made to transplant them to other locations within the housing area.

Environmentally beneficial landscaping will be installed in accordance with USMC Policy Letter 5090 LFL.1 and the MCBH INRMP, which require planting of native and Polynesian-introduced trees, shrubs, and ground cover species.¹ The MCBH Environmental Department would be consulted during the design phase for guidance in selecting appropriate plant species for landscaping.

With respect to Section 7 of the ESA, MCBH has considered the Proposed Action and alternatives and has determined that “no effect” on Federally listed threatened or endangered floral species will occur.

4.5 GEOLOGY, TOPOGRAPHY, AND SOILS

No significant impacts to the geology, topography, or soils of the project areas would occur under the Proposed Action or alternatives. The project areas consist of previously graded and disturbed land that is developed with housing, roads, and infrastructure. Where subsurface utility work may be conducted, the ground surface will be restored.

If fill material is needed, it will be selected for use in accordance with the specifications provided by a certified soils engineer to ensure stability of the built environment without an increase to maximum peak flow rates of storm drainage. In addition, soil or mulch that would be used for landscaping will be certified as weed-free; this will comply with MCBH’s recommended best management practices for handling soil and mulch used for landscaping and will reduce risk of introducing invasive species (see MCBH’s 2002 Invasive Species Management Study for further details).

4.6 GROUNDWATER

No impacts to groundwater are anticipated under the Proposed Action or alternatives. Earthmoving activities would primarily affect the upper layer of soil and are not anticipated to expose groundwater. No groundwater wells would be installed. The construction activities will include best management practices to prevent release of petroleum products or other hazardous substances used during construction.

¹ Environmental Compliance & Protection Department, G4, Marine Corps Base Hawaii and Sustainable Resources Group Int’l, Inc. November 2006. *Final Marine Corps Base Hawaii Integrated Natural Resources Management Plan Update (MCBH INRMP) (2007-2011)*.

4.7 AIR QUALITY

No significant impacts to air quality would be associated with the Proposed Action or alternatives. Construction-related impacts would be short-term and temporary. Emissions would result from generators, construction related vehicles, and fugitive dust. Fugitive dust will be minimized as required by HAR 11-60.1-33 and generators will operate as allowed under HAR 11-60.1. If a rock crusher is used for recycling concrete and asphalt (see Section 4.8.4), the appropriate air permit would be obtained by the PPV entity or its contractors.

No significant long-term impacts to air quality are expected, as a 225-unit reduction in the family housing inventory is planned and a proportional decrease in the number of associated vehicles is anticipated. An increase in electrical use is anticipated due to the planned installation of air conditioning within 409 housing units. Therefore, an indirect impact on air quality would occur from the additional air emissions associated with power generation. Such impacts will not be significant given existing CAA permit requirements and emission controls, as implemented by the DOH under HAR 11-60.1.

The PPV will implement applicable recommendations for radon testing, which include conducting screening in accordance with Navy Radon Assessment and Mitigation Program protocols.

4.8 INFRASTRUCTURE

4.8.1 Electrical

No significant impact on the electrical infrastructure would occur under the Proposed Action or alternatives as the estimated increase in electrical demand can be accommodated by HECO.² Using unit specific data, the electrical demand from family housing in the project area would increase by approximately 8,397.67 MWh per year due to the installation of air conditioning; however, the reduction in the number of units and the installation of solar panels would decrease the electrical demand by approximately 6,251.99 MWh per year. The overall increased electrical demand of 2,145.68 Mwh per year represents a 10.6 percent increase in electrical usage in the project family housing areas.

Under the action alternatives, each new residential unit will be metered and residents will be charged for electrical use. While the effect of this change is not quantified in this assessment, it is anticipated that electrical usage will be less than that estimated above.

² Personal communication between HECO and Belt Collins on February 20, 2007.

4.8.2 Potable Water

No significant impacts on the potable water infrastructure would occur under the Proposed Action or alternatives as there would be a reduction in the total number of housing units. In addition, new construction may include the installation of fixtures (e.g., faucets and toilets) that use less water than those currently installed in the housing units; however, this possible decrease can not be quantified at this time.

4.8.3 Wastewater

No significant impacts on the wastewater infrastructure are anticipated under the Proposed Action or alternatives as no changes to the wastewater infrastructure would be needed outside of the project areas, and the wastewater generated is expected to decrease with overall reduction in housing units. New construction may include the installation of fixtures (e.g., toilets) that could further decrease the wastewater volume; however, this possible decrease can not be quantified at this time.

4.8.4 Solid Waste

No significant impacts on the solid waste infrastructure are anticipated under the Proposed Action or alternatives as no changes to the solid waste collection infrastructure would be needed. The island landfills will be impacted by wastes associated with construction and demolition, but can adequately accommodate these wastes.³ The greatest amount of construction and demolition waste would be generated under the Proposed Action. Under the Representative Renovation Alternative, there would be slightly less construction and demolition waste as one of the housing units would be renovated instead of demolished and replaced. The Proposed Action and alternatives would include implementation of waste reduction methods such as recycling of construction and demolition debris, as practical. Current practices for recycling this waste include the use of a rock crusher for clean concrete and asphalt debris, and development of a recycling plan for construction and demolition debris.

Over the long-term, a net decrease in solid waste generated in the project areas is expected as the total number of family housing units would be reduced by 225 units.

4.8.5 Roads and Traffic

No significant impacts on roads and traffic would occur under the Proposed Action or alternatives. Under the action alternatives, demolition and replacement construction activities would occur over the first five years of the PPV award of Phase 4. During construction activities, there would be construction-related traffic,

³ Personal communication between PVT and Belt Collins on February 20, 2007.

utility line upgrades, and the potential for interior road realignment. Types of vehicles transiting to and from the site would include construction workers' personal vehicles, delivery trucks, and waste removal vehicles. The following types of heavy equipment would remain at the site to minimize road usage: excavators, backhoes, and bulldozers. The number of construction workers and other construction vehicles arriving and leaving the project areas would increase the number of vehicles on the MCBH installations during the workday. To further minimize the effects of construction-related traffic, the PPV entity will provide traffic control in the vicinity of the construction work, and will notify MCBH gate security of periods of heavier activity.

As the total number of family housing units would decrease by 225, a proportional reduction in the long-term impacts to roads or traffic is expected.

Under the No Action Alternative, impacts to roads and traffic would be similar to the action alternatives, except the timing of construction would likely be spread out over a longer period.

4.9 PUBLIC HEALTH AND SAFETY

Potential hazards to public health and safety are associated with flood hazards, hazardous materials and wastes, and noise. Potential impacts to public health and safety are described herein.

4.9.1 Flood Hazards

No significant impacts on public health and safety from flood hazards would occur under the Proposed Action or alternatives. Project areas within the identified 100-year floodplains would be used for construction laydown areas and maintenance/warehouse areas, and will not contain permanent buildings or be used for residential purposes. In accordance with 44 CFR 60.22, Criteria for Land Management and Use – Planning Considerations for Flood-prone Areas, habitable floor heights for new structures would be designed above the base flood elevation. In addition, site designs will be prepared in accordance with EO 11988 and City and County of Honolulu ordinances and rules that address flood protection.

4.9.2 Hazardous Materials and Wastes

No significant impacts on public health and safety from hazardous materials and wastes would occur under the Proposed Action or alternatives. Compliance with existing laws and regulations would prevent the public from exposure to hazardous materials and wastes. Contractors will be responsible for proper handling and disposal of contractor-generated hazardous waste and will follow covenants and restrictions identified in relevant real estate documents.

Demolition, renovation, and maintenance of family housing structures that contain ACM or LBP will be conducted in accordance with applicable Federal and State laws to prevent releases to the air or ground. Identified ACM will be removed before commencement of demolition or renovation operations, as required. Removal activities will comply with the National Emission Standards for Hazardous Air Pollutants to protect the general public from exposure to airborne contaminants known to be hazardous to human health, such as asbestos, enforced under HRS Chapter 342P (Asbestos and Lead). Asbestos removal activities will comply with Occupational Safety and Health Administration (OSHA) 29 CFR 1926.1101 (Asbestos) and Hawaii Occupational Safety and Health (HIOSH) 12-145.1 (Asbestos). Asbestos waste will be properly disposed of in a permitted landfill.

Construction activities that involve LBP surfaces (including demolition, surface preparation, painting, and decorating) will be conducted to prevent release of LBP material and will comply with the OSHA 29 CFR 1926.62 (Lead) and HIOSH 12-148.1 (Lead) to protect workers, and the Department of Housing and Urban Development's 24 CFR 35 (Lead-Based Paint Poisoning Prevention in Certain Residential Structures) to protect building occupants. Prior to disposal, the PPV entity will be responsible for testing the waste stream, as required by the State DOH, to determine disposal requirements.

As appropriate, the PPV entity will test soils for pesticides (including chlordane, heptachlor, and heptachlor epoxide) and materials will be properly managed.

4.9.3 Noise

No significant impacts on public health and safety from noise would occur under the Proposed Action or alternatives. Construction-related activities will generate noises that are likely to be audible in neighboring housing units or the nearby school, but would not be at levels that would be detrimental. The loudest potential construction equipment noise sources include pavers (88 decibel (A-weight scale) (dBA) at 50 feet [15.2 meters]), pneumatic tools (88 dBA at 50 feet [15.2 meters]), and trucks (93 dBA at 50 feet [15.2 meters]). Noise levels decrease significantly with increasing distance from the source; a 6 dB decrease is generally exhibited with each doubling of the distance between the source and the location at which noise is audible.⁴ Therefore, noise from trucks would be less than 65 dBA at a distance of 1,600 feet (488 meters). As construction progresses through the family housing areas, occupied housing units may be well within the 1,600-foot (488-meter) radius. The interior noise level in the family housing units with the windows closed would be expected to be 20 dB less than the exterior noise level, which would result in construction-related noise levels less than 65 dBA at a distance of 200 feet (61 meters). Potential noise impacts will be minimized by restricting

⁴ For example, if an activity generates 93 dBA at a distance of 50 feet (15 meters), the noise level at a distance of 100 feet (30 meters) would decrease to 87 dBA, and would further decrease to 81 dBA at a distance of 200 feet (61 meters).

construction work to daylight hours and limiting heavy equipment operations to late morning and early afternoon hours.

During the operational phase of the Proposed Action and alternatives, when residents are occupying the housing units, interior noise levels are generally expected to be below 65 Ldn in all family housing areas. For newer units (those constructed with central air conditioning) interior noise levels are expected to be lower than those units without central air conditioning.

4.10 SOCIO-ECONOMIC/DEMOGRAPHICS

No significant impacts to socioeconomics or demographics are anticipated from the Proposed Action or alternatives. A short-term, temporary reduction in available housing would occur during construction. New housing units may be attractive and may result in an increase in demand of on-base housing. The planned reduction of 225 housing units meets installation needs and does not adversely impact socio-economics or demographics.⁵

4.11 PUBLIC SERVICES

Under the Proposed Action and alternatives, the demand for public services is not expected to change and no impacts to public services are anticipated. Agreements will be made with MCBH to provide police, fire, and emergency medical services to the PPV housing. Construction/renovations of ancillary facilities such as a warehouse, community centers, play fields, and swimming pools would improve the capacity and quality of community facilities available to the resident military population.

4.12 CUMULATIVE IMPACTS

Cumulative impacts result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what entity undertakes such actions. This cumulative impact analysis considers reasonable future actions within the reasonable geographic boundaries for each potentially affected resource (presented in Table 4). The cumulative impacts associated with the Proposed Action and action alternative follow, with a description of the reasonable geographic boundaries for each of the potentially affected resources.

⁵ Robert D. Niehaus, Inc. 20 October 2005. *Marine Corps Base Hawaii, Oahu, Hawaii, 2005 Post-BRAC Recommendations Requirements Analysis.*

Table 4
Planned Construction Projects

Construction Project	Location Relative to Project Areas and Status
Hawaii PPV Housing Phase 1	CNRH housing areas on O'ahu. Lease effective until 30 April 2054; construction has begun.
Hawaii PPV Housing Phase 2	MCBH housing areas on O'ahu. Lease effective until 30 April 2054; construction has begun.
Hawaii PPV Housing Phase 3	CNRH housing areas on O'ahu and Kaua'i. Lease effective until 30 April 2054; construction has begun.
HI60834 Wetland Restoration / Percolation Ditch Replacement	South of Mokapu Road, within the Percolation Ditch and Mokapu Central Drainage Basin. Completed in 2007; undergoing regular monitoring and maintenance.
Phase 1 Communications Upgrade at MCBH	Family housing areas. Contract awarded in FY07.
Phase 2 Communications Upgrade at MCBH	Family housing areas. Contract award anticipated in FY07.
HI20010 Watershed Repair / Restore, MCDC	Part of Mololani (Capehart) housing areas within Mokapu Central Drainage Basin. Completion expected in 2008.
P-749 Bachelor Enlisted Quarters	South of Mokapu Road, within Mokapu Central Drainage Basin (FY08)
P-778 Armory Addition	South of Mokapu Road, on boundary of Mokapu Central Drainage Basin and watershed that drains to Nu'upia Ponds (FY10)
P-843 Multipurpose Training Complex/ Simulation Center	South of Mokapu Road, within watershed that drains to Nu'upia Ponds (FY10)
P-842 RAS/SMART Clinic	South of Mokapu Road, within watershed that drains to Nu'upia Ponds (FY10)
P-835 Child Care Center	South of Mololani (Capehart) housing area, within Mokapu Central Drainage Basin (FY11)
P-837 Enlisted Dining Facility	South of Mokapu Road, within Mokapu Central Drainage Basin (FY11)
P-824 Installation Logistics Staging Facility (1 of 5)	South of Mokapu Road, within watershed that drains to Nu'upia Ponds (FY12)
P-747 Battalion Headquarters	South of Mokapu Road, within Mokapu Central Drainage Basin and within watershed that drains to Nu'upia Ponds (FY12)
P-373 Expeditionary Fighting Vehicle Maintenance	South of Mokapu Road, within watershed that drains to Nu'upia Ponds (FY12)
P-838 Rappel Tower and Parachute Drying Tower	South of Mokapu Road, within watershed that drains to Nu'upia Ponds (FY13)
P-830 Installation Logistics Staging Facility (2 of 5)	South of Mokapu Road, within watershed that drains to Nu'upia Ponds (FY13)
P-781 Field Maintenance Shop (Ordnance)	South of Mokapu Road, within watershed that drains to Nu'upia Ponds (FY14)

Table 4
Planned Construction Projects (*continued*)

Construction Project	Location Relative to Project Areas and Status
P-784 Supported Activity Supply System Warehouse	South of Mokapu Road, within watershed that drains to Nu'upia Ponds (FY14)
P-775 Combat Service Support Group-3 Landing Support Company Headquarters Building	South of Mokapu Road, within watershed that drains to Nu'upia Ponds (FY15)
P-159 Installation Logistics Staging Facility (4 of 5)	South of Mokapu Road, within watershed that drains to Nu'upia Ponds (FY15)

Cultural Resources

The reasonable geographic boundaries for cultural resources consists of installation boundaries for historic housing areas identified in Section 3.1.1 and archaeological sites and burials identified in Section 3.1.2.

No significant cumulative impacts on cultural resources would occur as a result of the Proposed Action or action alternative with other construction projects identified in Table 4 as existing laws for archaeological sites and burials will be followed, and a PA will be executed at the conclusion of Section 106 consultation that mitigates any significant impacts. By following the ACHP-approved Program Comment for Wherry and Capehart Era Family Housing at Air Force and Navy Bases (18 November 2004), which addresses the housing areas in total and is intended to eliminate the case-by-case Section 106 consultations for these housing units, no significant cumulative effects on these historic housing units would occur.

Surface Water and Drainage

The reasonable geographic boundary for surface water and drainage is defined by the watersheds for the project area.

No cumulative impacts to surface water or drainage are anticipated as patterns of storm water flow and water quality will be similar to pre-construction conditions as required by applicable laws and regulations, including City and County of Honolulu ordinances and rules as specified in the PPV. System upgrades (e.g., replacement of old drainage lines) will be implemented as needed. The Proposed Action, action alternative, and other construction projects identified in Table 4 are not expected to result in significant cumulative impacts on surface water quality and drainage because the CWA regulations and City and County of Honolulu ordinances and rules that require evaluation of these issues will be followed.

Fauna

The reasonable geographic boundaries for fauna are defined by the project area and nearby habitat such as the MCDL or Nu'upia Ponds.

No cumulative impacts to fauna are anticipated as no significant impacts to Federal- or State-listed endangered or threatened fauna species will occur under the Proposed Action, action alternative, or other construction projects identified in Table 4. As mentioned in Section 4.3, best management practices will be used to prevent sediment and construction-related pollutants in storm water from entering habitat for endemic, endangered Hawaiian waterbirds, native and migratory waterfowl, and other aquatic life found in the MCDC and downstream wetlands.

Flora

The reasonable geographic boundaries for flora are defined by the project area.

No cumulative impacts to flora are anticipated as no significant impacts to Federal- or State-listed endangered or threatened floral species will occur under the Proposed Action, action alternative, or other construction projects identified in Table 4.

Geology, Topography, and Soils

The reasonable geographic boundaries for geology, topography, and soils are defined by the project area.

No cumulative impacts to geology, topography, and soils are anticipated as no significant impacts to these resources will occur under the Proposed Action, action alternative, or other construction projects identified in Table 4.

Groundwater

The reasonable geographic boundaries for groundwater are defined by the groundwater aquifers underlying the project area.

No cumulative impacts to groundwater are anticipated as no significant impacts to this resource will occur under the Proposed Action, action alternative, or other construction projects identified in Table 4.

Air Quality

The reasonable geographic boundary for air quality is defined by the island of O'ahu.

No cumulative impacts on air quality from mobile sources would occur as there would be no increase in vehicles from the Proposed Action, action alternative, or other construction projects identified in Table 4. Cumulative impacts on air quality would occur with the increasing electrical demands from the Proposed Action, action alternative, and the other construction projects identified in Table 4. With increasing demands for electricity, more emissions from power plants are anticipated, but these will be controlled by applicable air permit requirements and emission controls for these stationary source facilities.

Infrastructure

Electrical. The reasonable geographic boundary for the electrical infrastructure is defined by the HECO power supply system.

No significant cumulative impacts to the electrical infrastructure are anticipated as no significant impacts will occur to the electrical infrastructure under the Proposed Action, action alternative, or other construction projects identified in Table 4.

Potable Water. The reasonable geographic boundary for the potable water infrastructure is defined by the collective drinking water sources on O'ahu.

No cumulative impacts to the potable water infrastructure are anticipated as the volume of potable water used in the project area is expected to decrease under the Proposed Action, action alternative, or other construction projects identified in Table 4.

Wastewater. The reasonable geographic boundaries for the wastewater infrastructure are defined by the MCBH Kaneohe Bay treatment system.

No cumulative impacts to the wastewater infrastructure are anticipated as the volume of wastewater generated in the project areas is not expected to increase under the Proposed Action, action alternative, and other construction projects identified in Table 4.

Solid Waste. The reasonable geographic boundaries for solid waste infrastructure is the island of O'ahu and the capacity of its landfills.

No significant cumulative impacts to solid waste infrastructure are anticipated as the island's landfills are expected to accommodate the solid waste generated from the Proposed Action, action alternative, and other construction projects identified in Table 4.

Roads and Traffic. The reasonable geographic boundaries for roads and traffic are defined as the roadways of MCBH Kaneohe Bay.

No significant cumulative impacts on roads and traffic are expected as no net increase in vehicles or changes in traffic circulation are planned under the Proposed Action, action alternative, or other construction projects identified in Table 4.

Public Health and Safety (flood hazards, hazardous materials and wastes, and noise)

Flood hazards. The reasonable geographic boundary for public health and safety issues associated with flood hazards is defined by the boundary of the MCDC watershed.

No significant cumulative impacts of public health and safety from flooding would occur. The Proposed Action and action alternative will not affect the floodplain boundaries. Site designs will be prepared in accordance with EO 11988 and City and County of Honolulu ordinances and rules that address flood protection. Other construction projects identified in Table 4 include those

that will improve drainage on the installation; therefore, no cumulative adverse impacts are anticipated.

Hazardous Materials and Wastes. The reasonable geographic boundaries for public health and safety issues associated with hazardous materials and wastes are defined by the boundaries of the island's asbestos and construction and demolition landfills.

No significant cumulative impacts associated with hazardous materials or wastes would occur. While the asbestos waste and lead-containing construction and demolition waste would contribute to the island-wide disposal of these materials, the available landfill capacity includes projected housing construction waste.

Noise. The reasonable geographic boundaries for public health and safety issues associated with noise are defined by the project areas.

No significant cumulative impacts on public health and safety would occur from noise as the Proposed Action, action alternative, and other construction projects identified in Table 4 are not expected to substantially add to project related noise levels.

Socio-Economics/Demographics

The reasonable geographic boundaries for socio-economics/demographics are defined by MCBH Kaneohe Bay and the nearby towns.

No significant cumulative impacts to socioeconomic or demographics are anticipated as there would be a decrease in the number of family housing units and the associated populations under the Proposed Action, action alternative, and other construction projects identified in Table 4.

Public Services

The reasonable geographic boundaries for public services are defined by the areas served by each Federal public service providing services to MCBH Kaneohe Bay.

No significant cumulative impacts to public services are anticipated as there would be no substantial changes in populations under the Proposed Action, action alternative, or other construction projects identified in Table 4.

4.12.1 Executive Order 12898, Environmental Justice in Minority Populations and Low-Income Populations and Executive Order 13045 – Protection of Children from Environmental Health Risks and Safety Risks

Under EO 12898, dated 11 February 1994, Federal agencies are required to address the potential for disproportionately high and adverse human health and

environmental effects of their actions on minority and low-income populations. Because no significant or adverse impacts to human health have been identified and housing units would be available to military families stationed at MCBH, no disproportionately high and adverse human health and environmental effects on minority and low-income populations will result from the Proposed Action or alternatives.

Under EO 13045, dated 21 April 1997, Federal agencies are required to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children, and ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health or safety risks. The Proposed Action and alternatives would not pose risks to the health or safety of children attributable to products or substances that children are likely to come in contact with or ingest.

4.12.2 Possible Conflicts Between the Proposed Action and the Objectives of Federal Land Use Policies, Plans, and Controls

4.12.2.1 Coastal Zone Management Act

The purpose of the CZMA is to encourage coastal states to manage and conserve coastal areas as a unique, irreplaceable resource. To the maximum extent practicable, Federal actions affecting any land/water use or coastal zone natural resources must be consistent with the enforceable policies of an approved state coastal zone management program. The CZMA requires a consistency determination from the DBEDT for actions within the coastal zone, as defined by HRS §205A-1. However, CZMA consistency determinations are not required for actions on Federal property that would not have reasonably foreseeable direct and indirect effects on any use or resource in the coastal zone. MCBH has determined that the Proposed Action and action alternative would not have reasonably foreseeable direct or indirect effects on any use or resource in the coastal zone. A letter notifying DBEDT of this negative determination is in Appendix B.

4.12.2.2 MCBH Master Plan

The 2006 MCBH Master Plan identified several military construction projects planned in the vicinity of the project area, which are included in Table 4. The Proposed Action and action alternative would be consistent with the MCBH Master Plan with the continued use of family housing areas. The uses of the construction laydown areas and maintenance/warehouse areas would be consistent with current and planned uses of these areas.⁶

⁶ Personal communication from MCBH Facilities on March 21, 2007.

4.12.2.3 MCBH Integrated Natural Resources Management Plan

MCBH must manage its natural resources in compliance with the Federal Sikes Act Improvement Act of 1997, DoD Instruction 4715.3, and MCO P5090.2A, which mandate an ecosystem management approach for an INRMP. MCBH's INRMP/EA for 2002-2006, and the MCBH INRMP Update for 2007-2011, continue an established set of goals, objectives, and management actions to improve the overall sustainability and native biological diversity of the ecosystems, of which MCBH is a part, while supporting MCBH's military mission.⁷ A key component of the INRMP is to take a watershed-based approach to managing fish and wildlife in a mission compatible manner. The Proposed Action and action alternative would be implemented in a manner consistent with the MCBH INRMP.

4.12.2.4 MCBH Master Landscaping Study

The MCBH Master Landscaping Study provides guidelines for landscape and environmental development at MCBH with a list of prohibited and preferred species for landscaping at MCBH properties, which have been incorporated and updated in the 2006 MCBH INRMP (See Appendix D of the INRMP).⁸ The study includes landscape enhancement and development guidelines to ensure that sufficient resources are available to establish a pleasing and enjoyable living and working environment for installation personnel, residents, employees, and visitors. The Proposed Action and action alternative will be implemented in a manner consistent with the latest edition of the MCBH INRMP.

4.12.2.5 MCBH Invasive Species Management Study

The MCBH Invasive Species Management Study (ISMS) was designed to facilitate management activities to limit the negative impacts of invasive species at MCBH properties.⁹ The ISMS assesses available information, addresses critical information gaps and needs, and proposes a priority mix of invasive species actions to address these needs. The recommended management actions in this report are designed for ease of incorporation into future updates of the MCBH INRMP, as appropriate. The Proposed Action and action alternative would be implemented in a manner consistent with the MCBH ISMS.

⁷ Department of the Navy, Marine Corps Base Hawaii. November 2001. *Marine Corps Base Hawaii Integrated Natural Resources Management Plan and Environmental Assessment*.

Environmental Compliance & Protection Department, G4, Marine Corps Base Hawaii and Sustainable Resources Group Int'l, Inc. November 2006. *Final Marine Corps Base Hawaii Integrated Natural Resources Management Plan Update (MCBH INRMP) (2007-2011)*.

⁸ Environmental Compliance & Protection Department, G4, Marine Corps Base Hawaii and Sustainable Resources Group Int'l, Inc. November 2006. *Final Marine Corps Base Hawaii Integrated Natural Resources Management Plan Update (MCBH INRMP) (2007-2011)*.

⁹ Sustainable Resources Group Int'l, Inc. December 2002. *Marine Corps Base Hawaii Invasive Species Management Study Final Report*.

4.12.2.6 MCBH Integrated Cultural Resources Management Study

MCBH must manage its cultural resources in compliance with the requirements of MCO P5090.2A and OPNAVINST 5090.1B. The purpose of MCBH's ICRMP is to advance the protection, enhancement, and contemporary use of the cultural and historic properties owned by the Marine Corps.¹⁰ The Proposed Action and action alternative would be implemented in a manner consistent with the MCBH ICRMP.

4.12.2.7 Executive Order 11988, Floodplain Management

EO 11988 establishes a multi-step review process that seeks to avoid, to the maximum extent possible, long- and short-term adverse impacts associated with the occupancy and modifications of structures located in floodplains, wherever there is a practicable alternative. Each agency is required to evaluate the potential effects of any actions it may take in a floodplain to ensure that its planning and budget requests reflect consideration of flood hazards and floodplain management.

The EO requires Federal agencies to:

- Determine whether the proposed action will occur in a floodplain;
- Consider alternatives to avoid adverse effects and incompatible development in the floodplains if an agency has determined to or proposes to conduct, support, or allow an action to be located in a floodplain;
- Design or modify its action to minimize potential harm and prepare and circulate a notice containing an explanation of why the action is proposed to be located in the floodplain if the head of the agency finds that the only practicable alternative requires siting in a floodplain; and
- Provide opportunities for early public review of any plans or proposals for actions in floodplains.

The following summarizes applicability to the Proposed Action and action alternative:

- The EO calls for the use of "best available information" in determining whether a project will be located in a floodplain. Using FEMA maps and the MCDC study, the following was determined for the project area.
 - The housing units are not within the identified 100-year floodplain, and no potential floodways within the housing areas have been identified (Figure 6).
 - The construction laydown areas and maintenance/warehouse area are located in the floodplain. No permanent structures would be built in these areas.

¹⁰ U.S. Army Corps of Engineers Honolulu Engineer District. May 2006. *Integrated Cultural Resources Management Plan (ICRMP) Marine Corps Base Hawaii, O'ahu, Hawai'i*.

- Two alternatives to avoid adverse effects and incompatible development in the floodplain have been considered: (1) use temporary structures with floor heights elevated above base flood height (i.e., not use fill) and minimize material storage, and (2) avoid use of areas within the 100-year floodplain. The later alternative was less suitable than the Proposed Action and action alternatives, because land use constraints prevent relocation to other areas of MCBH Kaneohe Bay.
- No permanent buildings are proposed to be located within the floodplain. Temporary structures will have floor heights elevated above the base flood height, thus avoiding the risk of flood loss. This also minimizes the impact of flood hazards on human safety, health, and welfare.
- The preparation and circulation of this EA document will serve as the required notice explaining why the location of the Proposed Action and alternatives in a floodplain is the only practicable alternative.

4.13 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible commitments are those that cannot be reversed, except perhaps in the extreme long term. An example of an irreversible commitment is the mining of ore, as once the ore is mined it can never be replaced. Irretrievable commitments are those that are lost for a period of time. The development of a highway through a timber-producing forest would represent an irretrievable loss of the timber while the highway is present.

The Proposed Action and action alternative would irreversibly and irretrievably commit an affect on cultural resources, as a historic property would be demolished and lost forever. With the exception of fuels and materials to support the demolition and renovation activities of the Proposed Action and action alternative, respectively, no other irreversible or irretrievable commitments have been identified.

4.13.1 Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management

EO 13423, dated 24 January 2007, orders Federal agencies to conduct their environmental, transportation, and energy-related activities in an environmentally, economically and fiscally sound, integrated, continuously improving, efficient, and sustainable manner. Related actions required of Federal agencies include: reducing greenhouse gas emissions, meeting renewable energy standards, reducing water consumption, using sustainable environmental practices, reducing the quantity of toxic and hazardous chemicals and materials, and maintaining cost-effective waste prevention and recycling programs.

To the extent practicable, under the Proposed Action and action alternative, the PPV entity would: incorporate energy-efficient designs and techniques that would serve to minimize the overall energy consumption of the family housing; incorporate water-efficient fixtures; implement efficient waste handling methods and provisions for recycling waste products; and recycle demolition debris. The Proposed Action and action alternative have the potential to increase consumption of electricity associated with the installation of central air conditioning in the Mololani (Capehart) housing units, but would be partially offset by a decrease in electricity consumption from the installation of solar water heating in the project housing units.

4.14 RELATIONSHIP OF SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

The project areas are already urbanized and occupied by family housing units, and construction laydown and maintenance/warehouse areas. In this sense, there would be no change between the short- and long-term use of the land. Long-term productivity would be enhanced because military personnel and their families would be provided with more efficient housing.

In addition, MCBH will be able to reduce the man-hours and building materials required to maintain the existing housing stock. This is also a short- and long-term benefit.

CHAPTER FIVE

AGENCIES CONSULTED

Federal

Advisory Council on Historic Preservation

State of Hawai'i

Department of Land and Natural Resources, State Historic Preservation Officer

Other

Historic Hawai'i Foundation

Office of Hawaiian Affairs

Olds 'Ohana,

Paoa/Kea/Lono 'Ohana

Diamond 'Ohana,

O'ahu Burial Council, and

Keko'olani 'Ohana

CHAPTER SIX

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CHAPTER SEVEN

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This environmental assessment was prepared by the U.S. Navy through a contract task order issued to Belt Collins Hawaii. The following individuals were involved in the preparation of the document.

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Appendix A

Draft Programmatic Agreement, and Wherry and Capehart Era Family Housing Program Comment

1 PROGRAMMATIC AGREEMENT
2 AMONG
3 THE UNITED STATES OF AMERICA, DEPARTMENT OF THE NAVY,
4 THE HAWAI'I STATE HISTORIC PRESERVATION OFFICER, AND
5 THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
6 FOR THE
7 HAWAI'I PUBLIC – PRIVATE VENTURE (PPV) PHASE IV
8
9

10 WHEREAS, the United States of America, Department of the Navy ("Navy" or "DoN"),
11 acting by and through the Commanding Officer (CO), Marine Corps Base Hawaii
12 (MCBH), pursuant to the Military Housing Privatization Initiative (MHPI) (10 U.S.C.
13 2871 et seq.), proposes to privatize Marine Corps family housing in Hawai'i by entering
14 into a Public-Private Venture ("PPV") in order to fulfill family housing needs
15 ("Undertaking"); and
16

17 WHEREAS, the PPV entity is a Hawai'i limited liability company known as 'Ohana
18 Military Communities, LLC ("Company"), formed by the DoN and a private entity
19 known as Hawaii Military Communities, LLC ("HMC"), which will sign a real estate
20 ground lease ("Ground Lease") between the Company, as Lessee, and the DoN as Lessor;
21 and
22

23 WHEREAS, the Company shall implement the privatization of certain MCBH family
24 housing in Hawai'i; and
25

26 WHEREAS, the Company (pursuant to the Ground Lease and an operating agreement),
27 shall, among other things, design, finance, demolish, construct, own, manage, acquire,
28 lease, sell, rehabilitate, operate and maintain residential units and related improvements
29 on housing areas encumbered by the Ground Lease; and
30

31 WHEREAS, pursuant to the Ground Lease, the DoN will lease to the Company for the
32 Company's exclusive use and possession, beginning on or about October 1, 2007 and
33 ending on or about April 30, 2055 ("Expiration Date"), on the terms and conditions set
34 forth in the Ground Lease, the housing areas shown in Exhibit 1 ("Lease Area") and this
35 Programmatic Agreement ("PA") shall be an exhibit to that Ground Lease, which is
36 enforceable by the DoN, to ensure that the stipulations of this PA become an integral part
37 of the Ground Lease; and
38

39 WHEREAS, the DoN will convey to the Company certain facilities, personal property,
40 and improvements now or hereafter located on or used in connection with MCBH family
41 housing as defined in the Ground Lease (collectively, the "Structures"). These
42 Improvements shall include family housing, community centers, and ancillary units; and
43

44 WHEREAS, fee simple title to the land encumbered by the Ground Lease will remain
45 with the DoN, and title to the Structures will be conveyed by the DoN to the Company

1 and any Structures hereafter constructed by the Company shall also be held by the
2 Company, subject to the terms of the Ground Lease; and
3

4 WHEREAS, most of the Lease Areas have been extensively disturbed during housing
5 construction and other activities from prior military development, however isolated
6 human remains are occasionally encountered in sand fill throughout the installation; and
7

8 WHEREAS, Mololani Capehart and the construction laydown areas have been identified
9 in the *Integrated Cultural Resources Management Plan* (ICRMP) MCBH as either
10 having the potential or are known to contain NRHP-listed or potentially NRHP-eligible
11 archaeological resources (Exhibit 2); and
12

13 WHEREAS, the DoN has determined that the implementation of the Undertaking will
14 affect NRHP-listed, NRHP-eligible, or potentially NRHP-eligible archaeological
15 resources ("Historic Properties"), and has invited the Hawai'i State Historic Preservation
16 Officer ("SHPO"), the Advisory Council on Historic Preservation (ACHP), and other
17 Consulting Parties to participate in the consultation process in accordance with Sections
18 106 and 110(f) of the National Historic Preservation Act ("NHPA") as amended (16
19 U.S.C. § 470 et seq.), and the implementing regulations found at 36 CFR Part 800
20 ("Regulations"); and
21

22 WHEREAS, the nationwide historic context, *Housing an Air Force and a Navy: The*
23 *Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949-*
24 *1962)* (June 2007), was prepared to support the Departments of the Air Force and the
25 Navy in executing the Advisory Council on Historic Preservation (ACHP) *Program*
26 *Comment for Capehart and Wherry Era Housing at Air Force and Navy Bases*. The
27 ACHP issued the draft program comment on September 10, 2004 and the final comment
28 on November 18, 2004. The Department of the Air Force and the Department of the
29 Navy published their acceptance of the program comment in the *Federal Register* on
30 November 18, 2005. This programmatic treatment for residential properties was
31 developed in accordance with Section 106 of the National Historic Preservation Act of
32 1966 (NHPA), as amended, to take into consideration the effects of future management
33 activities upon Air Force and Navy housing constructed between 1949 and 1962.
34

35 WHEREAS, the nationwide historic context, *Housing an Air Force and a Navy: The*
36 *Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949-*
37 *1962)* (June 2007), identified no units of Particular Importance at military installations in
38 the state of Hawaii including MCBH; and
39

40 WHEREAS, the DoN has identified Capehart Era housing at Mololani (Capehart), which
41 is a type of housing covered under the *Program Comment for Wherry and Capehart Era*
42 *Family Housing at Air Force and Navy Bases*. The DoN, having completed the
43 aforementioned historic context, has satisfied its preservation requirements on a
44 nationwide basis for its Navy and Marine Corps installations; therefore, the MCBH
45 Section 106 requirements for the family housing at Mololani (Capehart) under this PA
46 are complete; and

WHEREAS, the Company will build 743 new replacement Structures at Mololani (Capehart); and

WHEREAS, the MCBH CO and SHPO have participated in the consultation in accordance with Sections 106 and 110 of the NHPA and its Regulations and are thus Signatories ("Signatories") to this PA, and are collectively and hereinafter referred to as such; and

WHEREAS, the Company has participated in the consultation in accordance with Sections 106 and 110 of the NHPA and its Regulations and have been invited to become an Invited Signatory "Invited Signatory" to this PA, and as such are collectively, with the aforementioned "Signatories", and hereinafter referred to as "Signatories"; and

- WHEREAS, the MCBH CO has consulted with Consulting Parties the Office of Hawaiian Affairs, the Olds 'Ohana, the Van Diamond 'Ohana, the Paoa, Kea, and Lono 'Ohana, Ka Lahui Hawai'i, Boyd 'Ohana, Kekumano 'Ohana, Ko'olauloa Hawaiian Civic Club, Hui Malama I Na Kupuna o Hawai'i Nei, Ortiz 'Ohana, Paguyo 'Ohana, Temple of Lono, Keko'olani 'Ohana, and the O'ahu Island Burial Council ("Consulting Parties") and invited these parties to sign and acknowledge concurrence to this PA; and

WHEREAS, the MCBH CO has consulted with Consulting Parties ("Consulting Parties") Historic Hawai'i Foundation; and

WHEREAS, in accordance with 36 CFR 800.6(a)(1), MCBH has notified the ACHP of its adverse effect determination with specified documentation and the ACHP has chosen not to participate in the consultation process.

NOW, THEREFORE, the Signatories agree that the Undertaking will be executed in accordance with the following Stipulations ("Stipulations") in order to take into account the potential effects of the Undertaking on Historic Properties and to establish a process for consideration of the effects on Historic Properties within the Lease Area after execution of the Ground Lease and conveyance of the Structures from the DoN to the Company.

STIPULATIONS

The MCBH CO shall ensure that the following measures are carried out by the MCBH CO or the Company:

I. APPLICABILITY AND SCOPE

This PA sets forth the process by which the MCBH CO shall meet its responsibilities under Sections 106 and 110 of the NHPA with respect to the provision of DoN family housing in Hawai'i. The Stipulations below establish the basis for the Company's

1 implementation of the Undertaking, provide mechanisms for considering the effect of the
2 Undertaking on Historic Properties, and specify how the MCBH CO will be involved in
3 any review.

4
5 II. GENERAL PROVISIONS AND ADMINISTRATIVE CONDITIONS

6
7 A. Roles and Responsibilities of the Signatories

8
9 1. Binding Terms. The terms of this PA are binding on all Signatories, and their
10 respective successors and assigns.

11
12 2. General Performance. The Signatories agree to perform their respective
13 obligations in a timely manner consistent with the terms and Stipulations of
14 this PA and to fully cooperate with other Signatories' efforts to comply with
15 Stipulations herein.

16
17 B. Reviews.

18
19 1. Responsibility to Complete Reviews and for Recipient to Receive Responses
20 in a Timely Manner. All reviews pursuant to this PA shall be completed
21 within the time periods specified, and time allowed for receipt of responses
22 will commence only upon Reviewing Consulting Parties' documented date of
23 receipt of Project Documentation.

24
25 2. Response Format. Pursuant to this PA, all formal responses will consist of
26 concurrence, objection, or inability to respond to Project Documentation. All
27 formal responses shall be in writing. The Signatories' written response may
28 consist of a formal letter or e-mail.

29
30 3. Role of the ACHP. ACHP may choose to participate in consultation as they
31 so elect, notifying the MCBH CO.

32
33 C. Professional Qualifications.

34
35 1. Use of Qualified Professionals. All Projects carried out by the Company
36 pursuant to this PA shall be carried out by, and with the review, oversight, and
37 direct supervision, of a qualified archaeologist, with a minimum of three (3)
38 years of experience in Hawaiian archaeology, ("Qualified Archaeologist") for
39 archaeology matters, including all matters involving ground-disturbance.

40
41 2. Standard of Qualifications. The Company's Qualified Archaeologist assigned
42 to the Project must meet *The Secretary of the Interior's Historic Preservation*
43 *Professional Qualification Standards* (Federal Register Vol. 62, No. 119, p.
44 33719, 1997), as amended or replaced in the future ("Professional
45 Qualifications").
46

D. Standard of Treatment.

- 1 Treatment of Archaeological Resources. All archaeological work undertaken in accordance with this PA will meet or exceed the guidelines provided by the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* as amended and annotated.
- 2 Training. The Company shall ensure that its supervisors of management, maintenance, treatment, and repair and its contractors are knowledgeable about and receive training on the Standards, and the terms of this PA, and are provided with copies thereof. Supervisors of housing management, maintenance, treatment and repair shall consult with the Company's Qualified Archaeologist (Stipulation II.C.1.) regarding proper treatment of Archaeological Resources, and shall attend an annual cultural sensitivity awareness session provided by the MCBH Cultural Resources Manager ("CRM") as needed based on staffing changes.
- 3 Regular Meetings with CRM. The Company shall meet with the MCBH CRM on an as-needed basis but not less than quarterly during the initial period of development (approximately five [5] years) to review proposed Projects, status of ongoing Projects, and other relevant aspects of the Undertaking affecting Historic Properties. The SHPO will be notified by the Company about the meetings and invited in a timely manner to attend, but the meetings will not be contingent upon SHPO's attendance. After the initial period of development, the Company shall meet annually with the MCBH CRM or at the request of either party.

III. UNDERTAKINGS THAT REQUIRE NO FURTHER REVIEW (EXEMPT ACTIVITIES).

- A. Definition of Exempt Activities and Notification and Review. Undertakings that Require No Further Review ("Exempt Activities"), by their nature and definition, constitute actions that will have no adverse effects on the Historic Properties. The Exempt Activities are exempt from notification requirements and review by SHPO. Work undertaken pursuant to this Stipulation III shall be reviewed and approved by the Company's Qualified Archaeologist, who shall determine and document whether a particular action meets the definitions of an Exempt Activity. Currently, no Exempt Activities are identified; however this PA may be revised according to III.B.
- B. Addition of Identified Exempt Activities. If the Signatories, with input from Reviewing Consulting Parties agree in writing, This PA may be revised with an amendment to include a list of Exempt Activities. Any such revision will be documented in the quarterly report described in Stipulation X. A list of Exempt Activities, as reviewed by the MCBH CRM with the Company's Qualified

1 Archaeologist, will determine which actions are exempt from further notification
2 or review by SHPO.
3
4

5 IV. PROJECT REVIEW AND CONSULTATION FOR ACTIONS WHICH MAY
6 AFFECT HISTORIC PROPERTIES -- GENERAL
7

8 Stipulations IV.A. through IV.E. apply to all future Projects and actions that will occur
9 within the term of the Ground Lease and in the Leased Area (or by the Company on
10 MCBH property) that may affect Historic Properties ("Projects"), including those
11 described in Stipulation V. Specific Projects, as discussed therein. All future Projects
12 proposed by the Company will have been approved by the DoN for compliance with PPV
13 standards and goals before the Company requests Project review and consultation.
14

15 A. Project Review and Documentation. Project Documentation shall include but not
16 be limited to the following (as appropriate to the proposed Project itself): a scaled
17 map showing general and specific Project location; GIS data (that comply with
18 geospatial data standards set forth in the draft U.S. Marine Corps Data
19 Management Guide) photographs of existing conditions; Project description;
20 Proposed Determination of the Proposed Project's effect on Historic Properties, as
21 indicated by a signature from the Company's Qualified Archaeologist; proposed
22 methods of construction (including maximum depth of excavations); and
23 proposed mitigation plans including an Archaeological Monitoring Plan
24 ("Archaeological Monitoring Plan") or Burial Treatment Plan ("Burial Treatment
25 Plan"), as appropriate, and a Final Archaeological Monitoring Report.
26

27 B. For each proposed Project, which may affect Historic Properties, the Company
28 shall submit Project documentation ("Project Documentation") to the MCBH
29 CRM, for initial review and approval. The MCBH CRM shall respond within ten
30 (10) business days. If the MCBH CRM does not respond, the Company shall
31 submit Project Documentation as stipulated in IV.A.4.
32

33 C. If the MCBH CRM objects to the Project Documentation, the CRM shall meet
34 with the Company to resolve any objections. The MCBH CRM retains the right
35 to make all eligibility determinations for archaeological resources. The MCBH
36 CRM also may elect to consult with Signatories and Consulting Parties on
37 eligibility determinations and mitigation measures.
38

39 D. If the MCBH CRM approves of the proposed determination of effect and or
40 proposed mitigation supplied in the Project Documentation, or if the MCBH CRM
41 does not respond within ten (10) business days, the Company shall submit Project
42 Documentation to all Signatories and Consulting Parties for review.
43

44 1. If no objections to Project Documentation are received from Signatories and
45 Consulting Parties within twenty (20) business days, the Company may
46 proceed.

2. If any Signatory or Consulting Party provides documentation or a telephone call of objection to Project Documentation within twenty (20) business days, the MCBH CRM together with the Company shall consult with Signatories and Consulting Parties to resolve the objection.

a. If the objection is resolved, the Project will proceed and Record Set will be provided to SHPO at Project completion.

b. If the objection is not resolved, the MCBH CRM together with the Company will proceed in accordance with the Dispute Resolution herein, Stipulation IX.

V. SPECIFIC PROJECTS

Seven hundred and forty-three (743) housing units will be constructed in the Mololani (Capehart) housing area. A portion of the existing Mololani (Capehart) housing area is situated on a NRHP listed site, Site 1017, a traditional Hawaiian burial area also known as the Mokapu Burial Area. Additionally, a larger portion of the existing housing area is located in an area designated as a "High" Archaeological Sensitivity Zone in the MCBH ICRMP and as such, is considered to have high potential for cultural deposits including burials (Exhibit 3). Due to the sensitivity of the two areas, replacement housing will be constructed outside of the high sensitivity area, which includes Site 1017 (Exhibit 4).

VI. PROJECT REVIEW AND CONSULTATION FOR ACTIONS WHICH MAY EFFECT NRHP-ELIGIBLE OR POTENTIALLY NRHP-ELIGIBLE ARCHAEOLOGICAL RESOURCES

Most of the ground within the Lease Area has been extensively disturbed during housing construction and other activities prior to military development. Lease areas previously identified as having been known to contain NRHP-eligible or potentially NRHP-eligible archaeological resources, include Mololani (Capehart) and the construction laydown areas (see Exhibit 1).

A. Mololani (Capehart). A portion of the Lease Area occurs within the boundaries of the Mokapu Burial Area, a site listed in the NRHP (see Exhibit 3). Additionally, isolated human remains have been encountered in areas filled with sand that may have been mined from the site.

1. Ground disturbing activities during demolition and/or construction of replacement housing will be monitored by a Qualified Archaeologist/s provided by the Company. Prior to ground disturbing construction work, the Company will prepare an Archaeological Monitoring Plan, and a draft will be submitted to the MCBH CRM for initial review and approval that shall be completed within five (5) business days. Upon approval of the plan, the

1 Company shall submit the draft to SHPO for a review period of twenty (20)
2 business days. Upon receipt of the Archaeological Monitoring Plan, SHPO
3 may provide comments to the Company within the 20 business day review
4 period. The Company shall address the comments in the final Archaeological
5 Monitoring Plan or Work Plan and will submit a copy of the final plan to the
6 MCBH CRM. If there are no comments the Company will then send the final
7 Archaeological Monitoring Plan or Work Plan to SHPO prior to
8 implementation. If no comments are received from SHPO upon receipt of
9 relevant documentation within the 20-business day review period, the
10 Company may proceed with the Project.

- 11
12 2. The Company's work dictated by the Archaeological Monitoring Plan or
13 Work Plan will be reviewed by the MCBH CRM and carried out or overseen
14 by a Qualified Archaeologist as required under Stipulation II.C.

15
16 B. Due to the past practice of mining sand from the Mokapu Dunes for use as fill
17 material on the base, archaeological monitoring will be required for all work
18 involving ground disturbance in the High Archaeological Sensitivity Zone and
19 wherever sand (fill or naturally occurring) is present, including ground disturbing
20 portions of demolition work on the existing units.

21
22 C. Other Archaeological Discoveries. For all other areas, treatment of inadvertent
23 archaeological discoveries of human remains and/or archaeological resources
24 during ground disturbing activities shall follow the procedures set under
25 Stipulation VII. A-E below.

26 27 VII. DISCOVERIES

28
29 When conducting all excavations, trenching, emergency repair of underground utilities,
30 or other ground disturbance in the Lease Area, the Company shall not intentionally or
31 knowingly remove, disturb, or cause to be removed any archaeological resources,
32 artifacts, human remains or objects ("Archaeological Discoveries").

33
34 A. Required Action Upon Discovery. In the event that a previously unidentified
35 Archaeological Discovery occurs during ground disturbing activities, the
36 following procedures shall be performed:

- 37
38 1. The Company shall immediately stop such work involving ground disturbance
39 in the immediate area of the Archaeological Discovery and in the surrounding
40 area as established by the Company's Qualified Archaeologist and take
41 measures to protect the Archaeological Discovery. Work may continue in the
42 Project area outside of the area of the Archaeological Discovery, as
43 determined by the Company's Qualified Archaeologist or the MCBH CRM.
44
45 2. The Company's Qualified Archaeologist, in consultation with the MCBH
46 CRM, shall assess the Archaeological Discovery for potential eligibility for

the NRHP (36 CFR § 60.4). Within one business day and after receiving written or telephone notification from the Company, the MCBH CRM together with the Company's Qualified Archaeologist shall inspect the discovery, assess significance and determine if further investigations are warranted. If the MCBH CRM does not respond in one business day, the Company's Qualified Archaeologist shall determine eligibility of the discovery.

- a) Not Eligible. If it is determined that the Archaeological Discovery is not eligible for the NRHP (36 CFR § 60.4), the Archaeological Discovery shall be recorded per the Archaeological Monitoring Plan after which work may resume in the immediate area of the Archaeological Discovery.
- b) Eligible. If it is determined that the Archaeological Discovery is eligible for the NRHP (36 CFR § 60.4), the MCBH CRM shall submit to SHPO documentation that includes an assessment of the resources' eligibility and an appropriate treatment plan. Work in the immediate area of the discovery may not resume until SHPO has notified the Company within five (5) business days of receipt of the documentation that the assessment and the proposed treatment plan is acceptable. If after five (5) business days, SHPO does not respond, the Company may proceed pursuant to the treatment plan.
- c) Disagreement as to Eligibility. The MCBH CRM and the Company will exercise good faith and attempt to resolve the eligibility determination. If the two parties can not agree, the MCBH CRM will make the final determination.

B. Discovery of Cultural Items.

1. Notification. If human remains, funerary objects, sacred objects, or objects of cultural patrimony ("Cultural Items") are encountered within the Lease Area by any action taken pursuant to this PA, work in the immediate vicinity as determined by the Company's Qualified Archaeologist or the MCBH CRM, will be halted and NAGPRA (43 CFR Part 10) procedures will be followed. The Company will immediately notify the MCBH CRM who shall consult and notify the following Native Hawaiian Organizations ("Native Hawaiian Organizations"), which have been recognized by MCBH as claimants having cultural affiliation to Cultural Items found at MCBH Kaneohe Bay:

- Office of Hawaiian Affairs
- Olds 'Ohana
- Paoa/Kea/Lono 'Ohana
- Keko'olani 'Ohana
- Van Diamond 'Ohana, and
- O'ahu Island Burial Council

- Ka Lahui Hawai'i
- Boyd 'Ohana
- Kekumano 'Ohana
- Ko'olaupia Hawaiian Civic Club
- Hui Malama I Na Kupuna o Hawai'i Nei
- Ortiz 'Ohana
- Paguyo 'Ohana
- Temple of Lono

2. In consultation with the aforementioned claimants and the MCBH CRM, the Company, shall develop and implement a plan, for the appropriate treatment of those Cultural Items in accordance with the Native American Graves Protection and Repatriation Act ("NAGPRA") (25 U.S.C. 3001 et seq., as appropriate) and the Archaeological Resources Protection Act ("ARPA") (16 U.S.C. 470aa et seq.) and their respective regulations.

- C. MCBH Ownership of Archaeological Discoveries. MCBH owns and is responsible for curation of the artifacts and associated records from NRHP-eligible or NRHP-listed archaeological resources recovered in the Lease Area in accordance with 36 CFR Part 79, "Curation of Federally Owned and Administered Archaeological Collections." Additionally, MCBH is responsible for the custody of any Cultural Items and will treat them in accordance with NAGPRA.

VIII. EMERGENCY ACTIONS

- A. Emergency Events. In the event of an emergency (ie. natural disasters, fires, sudden disruptions of utilities service, a spill event, or other emergency event that poses immediate threat to life and property ("Emergency Event"), the Company may take actions without consultation to control the emergency and stabilize any affected Historic Properties. After the immediate action and/or mitigation efforts are implemented the Company will notify the MCBH CRM of their actions. Where possible, such emergency measures will be undertaken in a manner that does not foreclose future preservation or restoration, with on-site monitoring by the appropriate Qualified Archaeologist. This emergency provision is limited to Projects initiated within ten (10) calendar days of an Emergency Event.
- B. Notification. If emergency action is required within three (3) business days after the Emergency Event, the Company shall advise the MCBH CRM and SHPO by telephone or via e-mail of the Emergency Event, the effect of the Emergency Event on the Historic Properties, and the steps being taken to address the Emergency Event's effect on the Historic Properties.
- C. Reporting Requirements. Within twenty (20) business days following this notification, the Company will provide the MCBH CRM and SHPO a written

1 report documenting actions taken, the Project's present status, and any continuing
2 treatment.

3
4 IX. DISPUTE RESOLUTION

5
6 A. Right to File Written Objection. If at any time during the implementation of this
7 PA, any Signatory objects to the manner in which this PA is being executed, the
8 objecting Signatory may file a written objection with the other Signatories.

9
10 B. Commencement of Consultation. Within twenty (20) calendar days of receipt of
11 such as objection and/or dispute, the MCBH CO shall commence consultation
12 with the objecting Signatory, and with other Signatories in order to resolve the
13 dispute.

14
15 C. Failure to Reach Resolution. If within twenty (20) calendar days of initiating
16 such consultation, the MCBH CO determines that the objection and/or dispute
17 cannot be resolved; the MCBH CO shall forward all documentation relevant to
18 the objection and/or dispute, including its proposed response to the ACHP and
19 other Signatories and request the ACHP review of the objection and/or dispute.
20 After receiving such documentation, the ACHP shall reconsider participation.

21
22 D. Response to Documentation of Consultation. Within thirty (30) calendar days
23 after receiving such documentation, the ACHP, per 36 CFR § 800 Appendix A,
24 shall either:

25
26 1. Advise the MCBH CO that it concurs with the MCBH CO's proposed
27 response to the objection and/or dispute, whereupon MCBH CO shall respond
28 to the objection accordingly; or

29
30 2. Provide the MCBH CO with recommendations, which the MCBH CO shall
31 take into account in resolving the objection and/or dispute; or

32
33 3. Notify the MCBH CO that it shall comment pursuant to 36 CFR § 800.7(c) and
34 proceed to comment within the time frames specified therein. Any comment
35 provided in response to this request shall be understood to apply only to the
36 subject of the objection and/or dispute and shall be taken into account by the
37 MCBH CO in accordance with 36 CFR § 800.7(c)(4) with reference to the subject
38 of the objection and/or dispute.

39
40 E. Notification. The MCBH CO shall notify the Company of its determination
41 pursuant to Stipulations IX.A through IX.E above and the Company shall proceed
42 accordingly.

43
44 F. Responsibilities for Unaffected Actions. The responsibility of the MCBH CO
45 and/or the Company to carry out actions under this PA that are not the subject of
46 objection and/or dispute shall remain unchanged. However, until the objection

1 and/or dispute are resolved in accordance with this Stipulation IX, work subject to
2 the objection and/or dispute shall not proceed. Work not subject to objection
3 and/or dispute may proceed provided that said work is unrelated to and does not
4 affect the work subject to objection and/or dispute.
5

- 6 G. Rights of Other Interested Parties. This Stipulation does not preclude other
7 interested parties from notifying the MCBH CO of any objection and/or dispute
8 they have as to the manner in which this PA is being implemented. The MCBH
9 CO shall determine whether any action is necessary, to respond to these other
10 interested parties.
11

12 X. REPORTING REQUIREMENTS AND MONITORING 13

- 14 A. Documentation. The Company shall maintain case files on the Historic Properties
15 and provide copies to the MCBH CRM. The Company shall maintain a case file
16 on any archaeological Projects with NRHP-listed, -eligible, or potentially NRHP-
17 eligible archaeological resources undertaken pursuant to this PA, the information
18 for which shall be provided by MCBH or the Company as appropriate. Any such
19 case files shall include documentation related to: archaeological issues;
20 correspondence related to consultation with SHPO; Proposed Determination of
21 NRHP eligibility; and reports on any surveys conducted or excavations
22 undertaken. Copies of the case files shall be provided to MCBH and SHPO upon
23 request. The case files shall be transferred to MCBH upon expiration or
24 termination of the Ground Lease. Archaeological site information shall be kept
25 confidential consistent with the provisions of ARPA.
26

- 27 B. Annual Reports. Beginning July 1, 2008, the Company shall prepare and
28 distribute to the other Signatories and Consulting Parties annual reports
29 summarizing the activities in the implementation of this PA for the previous
30 calendar year, July 1 to June 30 ("Annual Report"). The Annual Report shall
31 include, but is not limited to actions taken by the Company in accordance with
32 Stipulation III, activities related to Exemptions; Stipulations III through VII; a
33 summary of meetings with the DoN or MCBH CRM; descriptions of
34 unanticipated problems that have arisen or that could affect the integrity or
35 management of Historic Properties; information regarding any unanticipated
36 subsurface discoveries and subsequent archaeological work; and any other
37 activity or policy that may affect Historic Properties. Consistent with ARPA, no
38 site-specific information related to archaeological sites shall be included in any
39 annual report. If applicable, the report shall also include an evaluation of NRHP
40 eligibility of properties that have reached fifty (50) years of age or some other
41 relevant significance during the previous calendar year. For 2008, a partial
42 Annual Report will be prepared and distributed to the other Signatories
43 summarizing the activities and implementation of this PA for the period just after
44 transfer of the Lease Area to the Company to June 30, 2008.
45

1 C. Public Inspection and Comment. The Company shall ensure that Annual Reports
2 are available for public inspection and comment by placing them on a website. If
3 comments are received, the Company shall provide such comments to the other
4 Signatories for their review.

5
6 D. Annual Meeting and Monitoring
7

8 1. Annual Meeting. The Company shall meet annually with SHPO to review the
9 Projects undertaken by the Company pursuant to this PA during the previous
10 calendar year. The annual meeting under this PA shall be held within ninety
11 (90) calendar days of the close of the calendar year, but at a minimum afford
12 fourteen (14) calendar days for review of the Annual Report. The Company
13 shall invite the MCBH CRM, the DoN, and other Consulting Parties to this
14 PA. Invitees may choose whether to participate in such meetings. Such
15 meetings will be separate from those outlined in Stipulation II.D.5. Every
16 fifth Annual Meeting the Signatories will meet to consider whether any
17 changes to this PA are necessary or appropriate.

18
19 2. Monitoring and Review. The MCBH CRM, the ACHP and SHPO may
20 monitor and review the activities carried out pursuant to this PA and the
21 Company shall cooperate with the MCBH CRM and SHPO in their
22 monitoring and review responsibilities.
23
24

25 XI. ANTI-DEFICIENCY ACT 26

27 A. Requirements Subsequent to Availability of Funds. All requirements set forth in
28 this PA requiring the expenditure of Federal funds are expressly subject to the
29 availability of appropriations and the requirements of the Anti-Deficiency Act, 31
30 USC § 1341. No obligation of this PA shall require or be construed to require a
31 commitment by the DoN to expend funds not appropriated for a legally sufficient
32 purpose.
33

34 B. Severability. The obligations of this PA as to the DoN are severable. If the DoN
35 cannot perform any obligation set forth in this PA because of the unavailability of
36 funds, the Signatories intend that the remainder of the PA be executed to the
37 greatest extent practicable. The Signatories agree to consult on any obligation of
38 the PA that cannot be performed because of the unavailability of funds.
39

40 XII. AMENDMENTS 41

42 A. Consultation. If a change occurs in the Undertaking that creates new
43 circumstances that must be addressed, if the DoN or the Company determine that
44 they cannot fulfill the terms of this PA or otherwise deem it necessary to seek an
45 amendment to this PA, if experience working under the terms of this PA indicate
46 that there is a more efficient mechanism for implementing the reviews and

1 consultations established herein, or if the Signatories agree for any other reason,
2 this PA may be amended through consultation with the other Signatories and
3 Consulting Parties.
4

5 B. Written Concurrence Required. Any amendment to this PA shall be in writing
6 and only be effective upon the concurrence in writing of all Signatories with input
7 from Consulting Parties.
8

9 XIII. EFFECTIVE DATE, ASSIGNMENT, AND DURATION
10

11 A. Effective Date. Once this PA has been fully executed by all Signatories, it shall
12 become effective as of the date of the execution and delivery of the Ground
13 Lease.
14

15 B. Assignment. HMC shall assign its right and obligations under this PA to the
16 Company upon the conveyance by Ground Lease of the Structures to the
17 Company.
18

19 C. Termination. This PA shall automatically terminate at the end of the Ground
20 Lease and any extensions thereof, unless terminated under Stipulation XIV.
21

22 D. Renewal. If the Ground Lease is extended, the Signatories to this PA will consult
23 on the need to amend this PA at the same time the Ground Lease is being
24 considered for renewal.
25

26 E. Execution. This PA may be executed in multiple original counterparts, each of
27 which shall be deemed an original, and which together shall constitute one and the
28 same PA.
29

1 XIV. TERMINATION

2
3 Any Signatory may terminate this PA by providing to the other Signatories thirty (30)
4 calendar days written notice of its intent to terminate. Notification shall include
5 justification for termination.

6
7 Execution of this PA and implementation of its terms evidences that the DoN has
8 satisfied its NHPA Section 106 and Section 110 responsibilities for the proposed
9 privatization of Marine Corps family housing in Hawai'i and has taken into account the
10 potential effects of this Undertaking on Historic Properties.

Signatories

MARINE CORPS BASE HAWAII

By: _____

Date: _____

(b) (6)

Colonel, U. S. Marine Corps
Commanding Officer
Marine Corps Base Hawaii

HAWAI'I STATE HISTORIC PRESERVATION OFFICE

By: _____

Date: _____

(b) (6)

Hawai'i State Historic Preservation Officer

1 Invited Signatories

2

3 OHANA MILITARY COMMUNITIES, LLC.

4

5

6 By: _____

Date: _____

7

ACKNOWLEDGEMENT OF CONCURRENCE

OFFICE OF HAWAIIAN AFFAIRS

By: _____

Date: _____

OLDS 'OHANA

By: _____

Date: _____

PAOA/KEA/LONO 'OHANA

By: _____

Date: _____

VAN DIAMOND 'OHANA

By: _____

Date: _____

LONO 'OHANA

By: _____

Date: _____

KA LAHUI HAWAI'I

By: _____

Date: _____

1 BOYD 'OHANA

2
3
4 By: _____

Date: _____

5
6
7
8 KEKUMANO 'OHANA

9
10
11 By: _____

Date: _____

12
13
14
15 KO'OLAULOA HAWAIIAN CIVIC CLUB

16
17
18 By: _____

Date: _____

19
20
21
22 HUI MALAMA I NA KUPUNA O HAWAI'I NEI

23
24
25 By: _____

Date: _____

26
27
28
29 ORTIZ 'OHANA

30
31
32 By: _____

Date: _____

33
34
35
36 PAGUYO 'OHANA

37
38
39 By: _____

Date: _____

40
41 TEMPLE OF LONO

42
43
44 By: _____

Date: _____

1
2 KEKO'OLANI 'OHANA
3
4

5 By: _____
6
7

Date: _____
8

9 O'AHU ISLAND BURIAL COUNCIL
10
11

12 By: _____
13
14

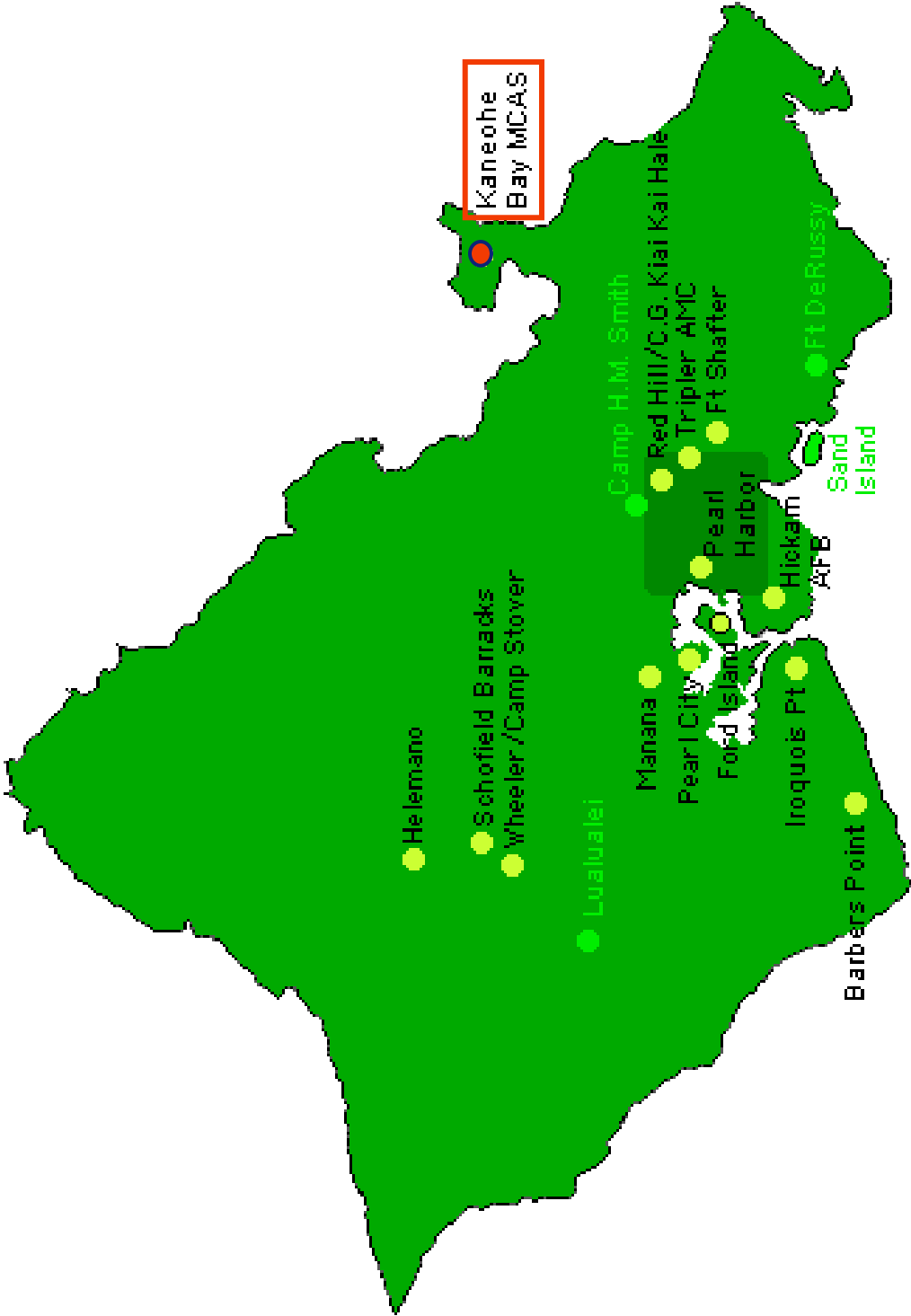
Date: _____
15

16 HISTORIC HAWAI'I FOUNDATION
17
18

19 By: _____

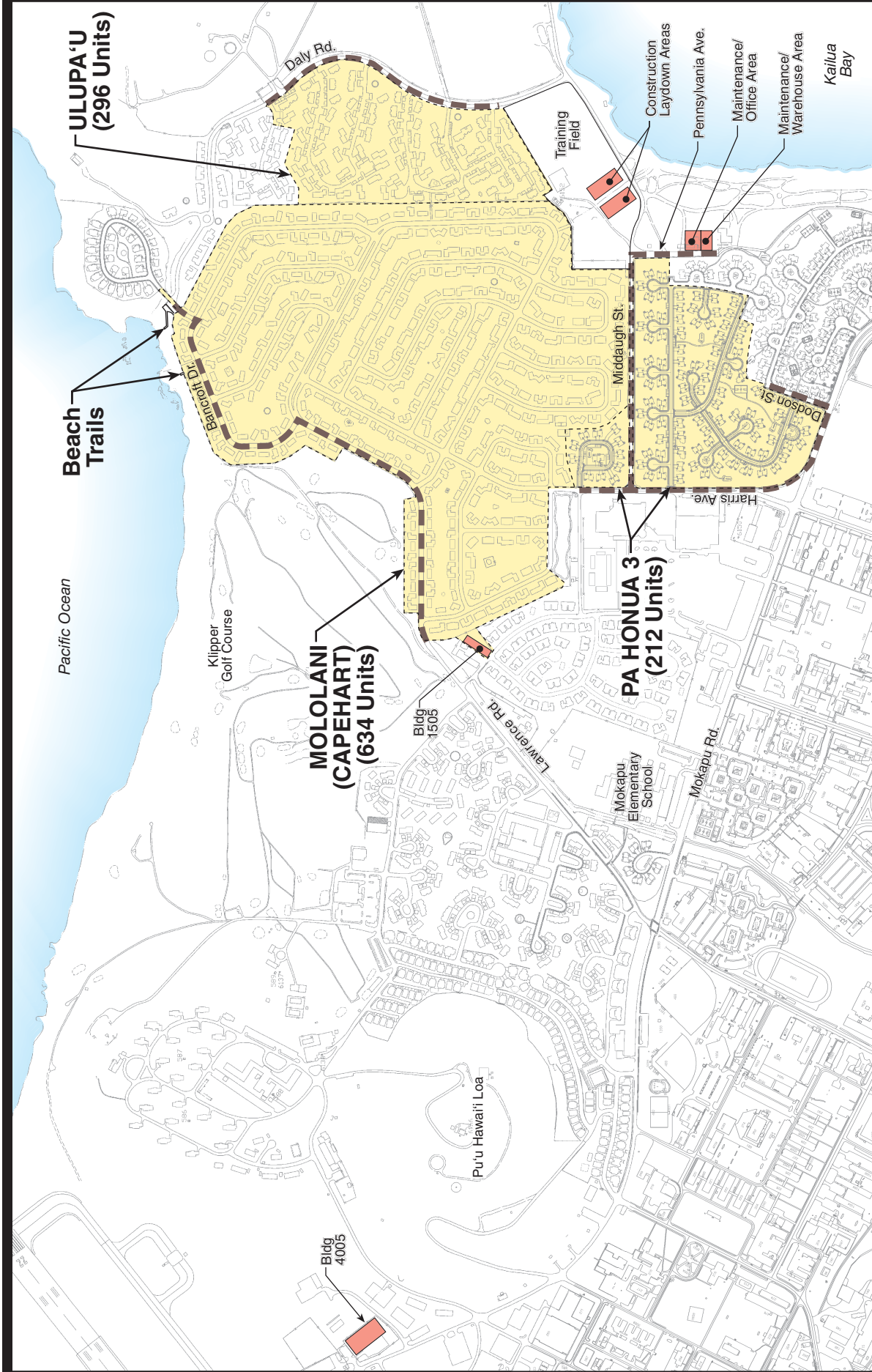
Date: _____

Installation Location: Oahu Vicinity Map



Lease Area

2005.82.0111/001-2 k05.10.07 5



Maintenance/warehouse areas, construction laydown areas, and areas to be maintained by the PPV entity (training field not shaded)

LEGEND

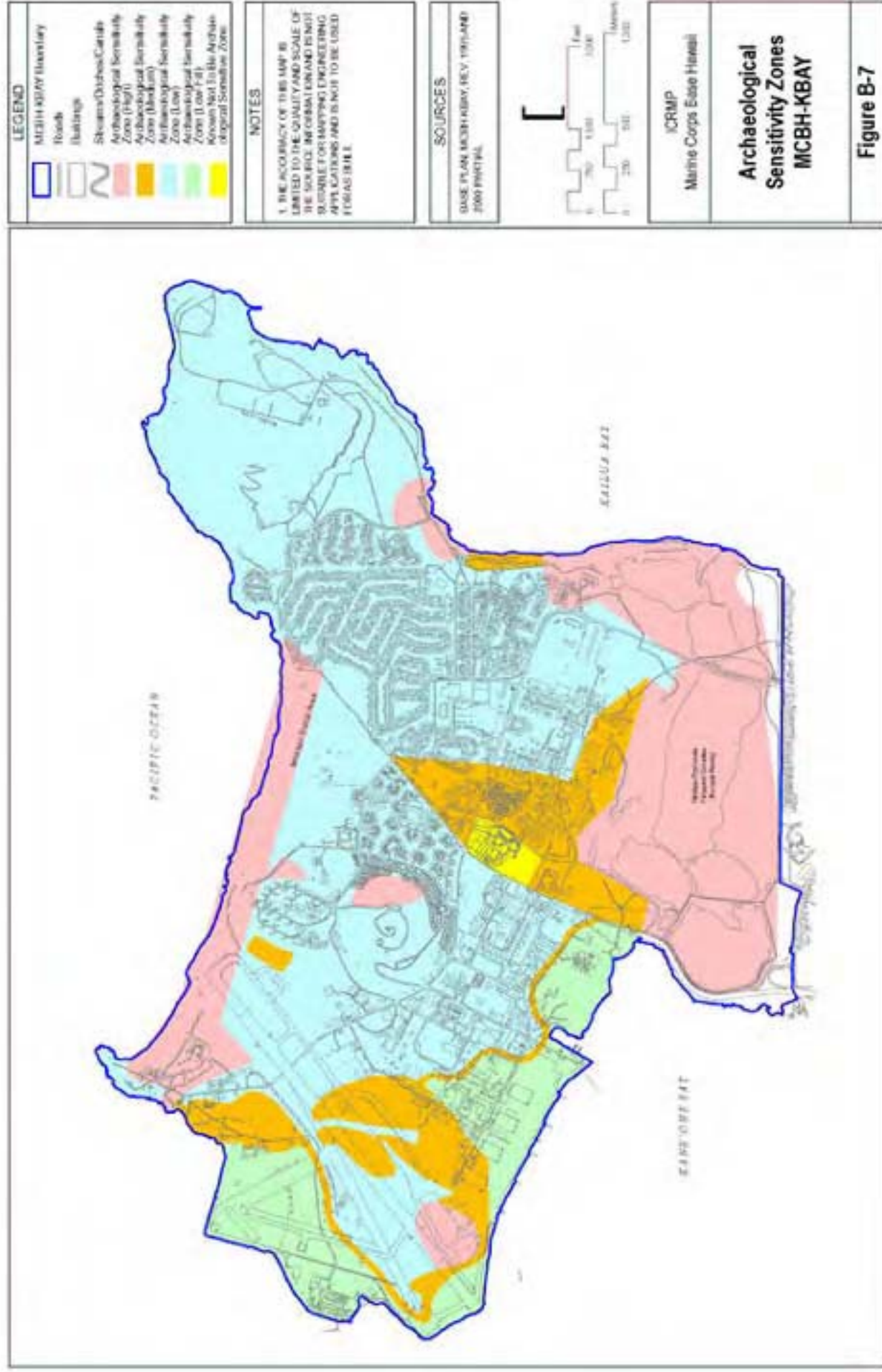
- Housing areas
- Road alignments to remain unchanged

Note: Boundaries do not represent legal real estate bounds.

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SCALE IN FEET

0 75 150 300
SCALE IN METERS





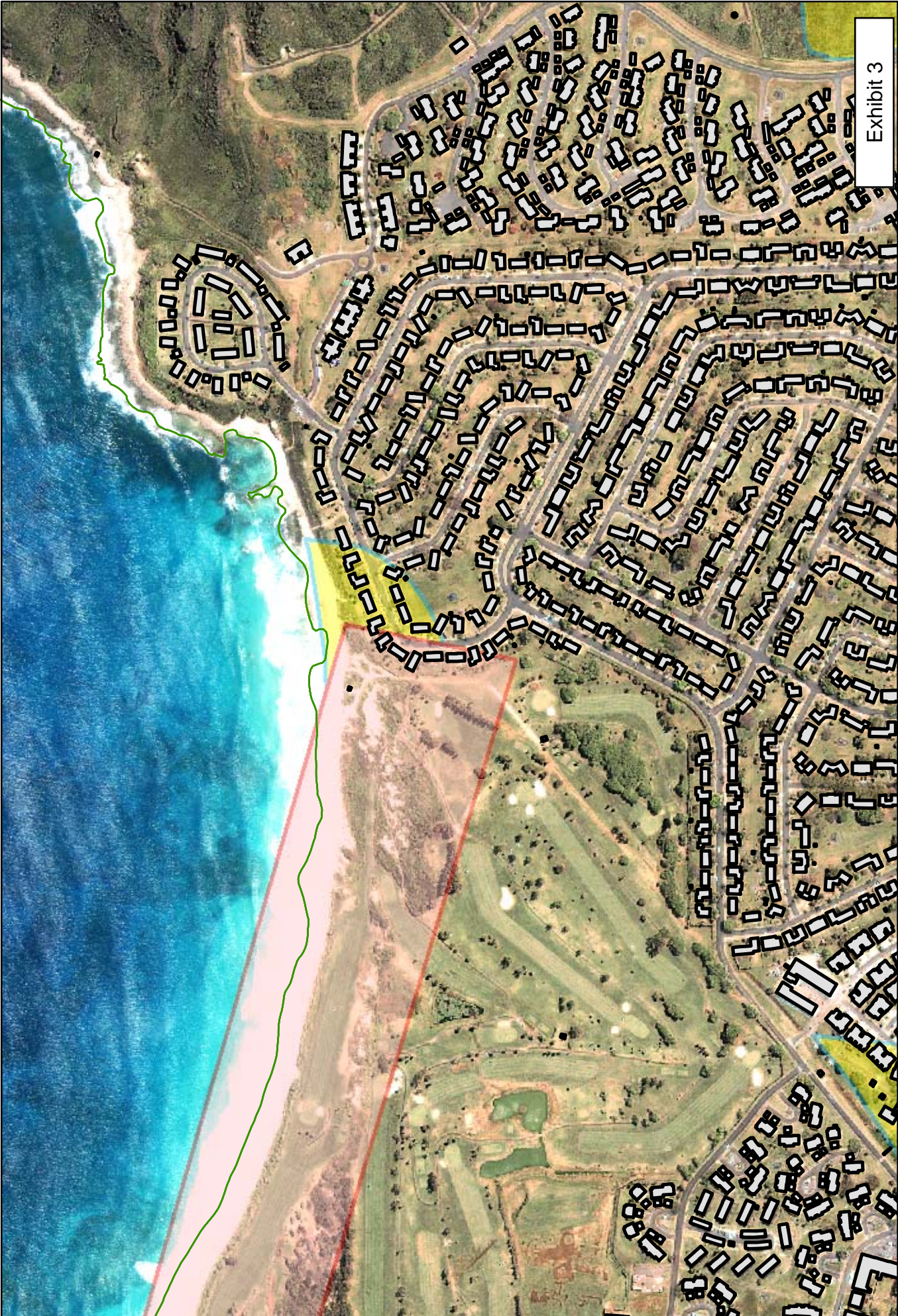
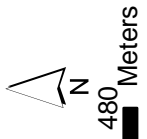
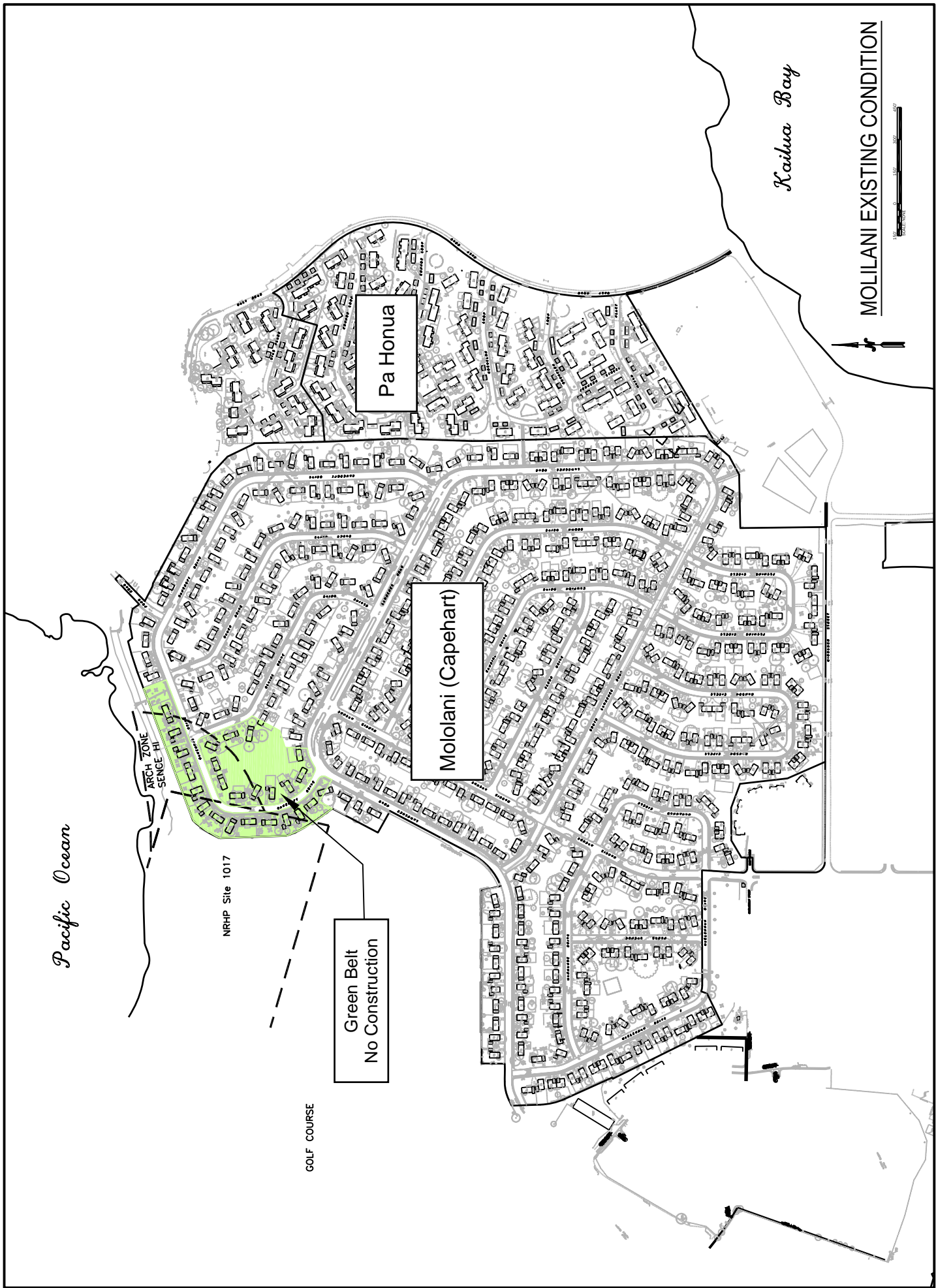


Exhibit 3

- Archaeological Sensitivity Zone
- Mokapu Burial Area





(b) (6)

Chairman

(b) (6)

Vice Chairman

(b) (6)

Executive Director



Preserving America's Heritage

November 18, 2004

(b) (6)

Deputy Assistant Secretary (Environment)

Department of the Navy

1000 Navy Pentagon

Washington, DC 20350-1000

Dear (b) (6)

We are pleased to inform you that the Council members approved the *Program Comment for Wherry and Cupehart Era Family Housing at Air Force and Navy Bases* (attached). In accordance with the Council's regulations at 36 CFR § 800.14(e)(5)(i), you may now take into account our comments for carrying out all Navy undertakings within this category.

If you decide to adopt our comments for this category of undertakings in lieu of conducting individual reviews under §§ 800.4 through 800.6, you must publish a notice of the Council's comments in the *Federal Register* and the steps you will take to ensure that effects to historic properties are taken into account.

If the Navy fails to carry out its undertakings for this category consistent with the Program Comment, the Council may withdraw the comment. If this were to occur, the Navy would be required to comply with §§ 800.3 through 800.6. The Navy may also decide that it no longer wants to comply with the Program Comment, in which case it must comply with §§ 800.3 through 800.6.

We appreciate the level of commitment and dedication of your staff in working with the Council on this issue, and we look forward to continuing to assist the Navy in managing its significant inventory of historic properties.

Sincerely,

(b) (6)

Executive Director

enclosure

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 809 • Washington, DC 20004

Phone: 202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov



Preserving America's Heritage

Program Comment

for

Wherry and Capehart Era Family Housing At Air Force and Navy Bases

I. Introduction

This Program Comment, adopted pursuant to 36 CFR § 800.14(e), demonstrates Department of the Air Force (Air Force) and Department of the Navy (Navy) compliance with their responsibilities under Section 106 of the National Historic Preservation Act with regard to the following actions in the management of the Wherry and Capehart Era family housing: maintenance, repair, layaway, mothballing, privatization and transfer out of federal agency ownership, substantial alteration through renovation, demolition, and demolition and replacement of Wherry and Capehart Era housing, associated structures and landscape features that may be eligible for listing on the National Register of Historic Places.

II. Treatment of Wherry and Capehart Properties

A. Eligibility

The Department of the Army (Army) conducted a historic context of its Wherry and Capehart properties and documented these in a report entitled *For Want of a Home: A Historic Context for Wherry and Capehart Military Family Housing*. On May 22, 2001, the Army sponsored a

ADVISORY COUNCIL ON HISTORIC PRESERVATION

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symposium on Wherry and Capehart era housing management as it related to historic preservation. The symposium was attended by preservation experts, including the National Trust for Historic Preservation (Trust), the National Conference of State Historic Preservation Officers (NCSHPO), the Advisory Council on Historic Preservation (ACHP), and nationally recognized experts in the field of historic preservation from academia and industry. Symposium participants recommended a programmatic approach to complying with Section 106, and these approaches were part of the Army's Program Comment which was approved by the ACHP in 2002 (67 FR 39332; June 7, 2002).

The Air Force and the Navy have gathered data on their inventory of Wherry and Capehart properties which will be appended to the Army's context study, as outlined below, to provide a comprehensive understanding of the Department of Defense (DoD) inventory for this property type. As with the Army, the Air Force and the Navy consider their inventory of Wherry and Capehart properties, including any associated structures and landscape features, to be eligible for the National Register of Historic Places for the purposes of Section 106 compliance.

B. Treatment

The Air Force and the Navy have requested a Program Comment as a service-wide Section 106 compliance action related to management of Wherry and Capehart Era housing, associated structures and landscape features. This programmatic approach will facilitate management actions for maintenance, repair, layaway, mothballing, privatization and transfer out of Federal agency ownership, substantial alteration through renovation, demolition, and demolition and replacement of Wherry and Capehart Era housing, associated structures and landscape features. Such actions present a potential for adverse effects to historic properties.

Based on the Program Comment previously approved for the Army for this property type, and following meetings with the ACHP, the Trust and NCSHPO, the Air Force and the Navy agree to the following six-step approach to the treatment of its Wherry and Capehart properties:

(i) The Air Force and the Navy will:

(a) revise the Army's historic context, *The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949–1962): A Historic Context*, to include information pertinent to Air Force and Navy bases where this information differs from that provided in the Army's context study, including information on Navy and Air Force Capehart and Wherry Era Housing architects, sponsors and bidders, & projects. The expanded context study will provide a more complete picture of Wherry and Capehart Era family housing across DoD, and

(b) upon completion of the revised context study, the Air Force and the Navy will use it and any resulting oral histories recorded in accordance with section II(B)(vi), below, to prepare a report suitable for release to the general public. The report to the public will extract that information which may be deemed sensitive or inappropriate for release to the public; the resulting context study will be placed on a publicly accessible web site and

copies of the report will be provided to all the SHPOs, NCSHPO, the Trust and the ACHP.

(ii) The Navy and Air Force will review the results of the expanded and revised context study and determine whether any of those properties identified under Section II(B)(i)(a) are of particular importance. The Navy and Air Force will notify the Council of the results of this review, and the Council will forward the results to the NCSHPO, and the Trust.

(iii) The Air Force and Navy will use, or modify for their own use, the Army's design guidelines: *Neighborhood Design Guidelines for Army Wherry and Capehart Housing*. Modified design guidelines will be provided to ACHP for review. Copies of the Air Force and Navy guidelines will be provided to the NCSHPO, the Trust and the ACHP. These Neighborhood Design Guidelines will be distributed by Headquarters, Air Force and Navy to those offices that manage and maintain this housing type and they will be encouraged to consider the design guidelines in planning actions that affect their Wherry and Capehart Era housing, associated structures and landscape features.

(iv) For Wherry and Capehart properties that have been determined to be of particular importance, as defined in the revised context study, the Air Force and the Navy will:

(a) consider the need to conduct additional historical documentation, and

(b) within funding and mission constraints, consider the preservation of these properties through continued use as military housing.

(v) The Air Force and the Navy will advise developers involved in housing privatization initiatives that Wherry and Capehart properties may be eligible for historic preservation tax credits.

(vi) The Air Force and the Navy will attempt to locate and conduct oral interviews with military families who lived in Wherry and Capehart housing (which may include Army families), and other people who were involved with design and construction of Capehart and Wherry Era housing. Prior to conducting any interviews, the Air Force and the Navy will seek advice from appropriate government offices such as the Library of Congress' *Veterans History Project* and the military service historical centers to develop a set of appropriate interview questions and proper formats in which interviews would be recorded. Upon completion of the oral histories, the Air Force and the Navy will provide a copy of all written and recorded documentation to the Library of Congress.

III. Applicability

This Program Comment does not apply to the following properties that are listed, or eligible for listing, on the National Register of Historic Places:

(i) archeological sites,

(ii) properties of traditional religious and cultural significance to federally recognized Indian tribes or Native Hawaiian organizations, or

(iii) historic properties other than Air Force and Navy Wherry and Capehart Era housing, associated structures and landscape features.

V. Schedule for Completion:

(i). Within 12 months from Council approval of the Program Comment, the Air Force and Navy shall complete:

(a). the expanded and revised context study for Capehart and Wherry Era housing as described in Section II(B)(i)(a), above;

(b). review of the context study for properties of particular importance as described in II(B)(ii), above; and

(c). adoption of the design guidelines as described in Section II(B)(iii), above.

(ii) Within 24 months from Council approval of the Program Comment, the Navy and Air Force shall complete:

(a). its consideration of properties of particular importance as described in Section II(B)(iv), above;

(b). completion of the oral history segment of the mitigation, as described in Section II(B)(vi), above, and

(c). completion of the context study suitable for release to the general public, as described in Section II(B)(i)(b), above.

IV. Effect of Program Comment

The ACHP believes that this six-step approach will ensure that the Air Force and the Navy take into account the effects of management of their Wherry and Capehart era housing. By following this comment and outlined six-step approach, the Air Force and the Navy will have met their responsibilities for compliance under Section 106 regarding management of their Wherry and Capehart era housing. Accordingly, Air Force and Navy bases will not have to follow the case-by-case Section 106 review process for each individual management action.

The Air Force and the Navy may carry out management actions prior to the completion of all of the six treatment steps outlined above, so long as such management actions do not preclude the eventual successful completion of those six steps.

This Program Comment will remain in effect until such time as the Air Force or the Navy determines that such comments are no longer needed and notifies ACHP, in writing, or the ACHP determines that the consideration of Wherry and Capehart properties is not being carried out in a manner consistent with this Program Comment. The ACHP may withdraw this Program Comment in accordance with 36 CFR §800.14(e)(6). Following such withdrawal, the Air Force and the Navy would comply with the requirements of 36 CFR §§ 800.3 through 800.7 for each individual management action.

The ACHP Membership approved this Program Comment on November 18, 2004.

(b) (6)



November 18, 2004

Date

Appendix B

Coastal Zone Management Act Notification Letter



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND, PACIFIC
258 MAKALAPA DR., STE. 100
PEARL HARBOR, HAWAII 96860-3134

5090P.1F3B
Ser EV2/ 475
16 MAY 2007

(b) (6) Director
Attn: Coastal Zone Management Program
Office of Planning
Department of Business, Economic
Development and Tourism
P.O. Box 2359
Honolulu, Hawaii 96804

Dear (b) (6)

SUBJECT: COASTAL ZONE MANAGEMENT ACT NEGATIVE DETERMINATION
NOTICE, HAWAII PUBLIC-PRIVATE VENTURE HOUSING, PHASE 4,
MARINE CORPS BASE HAWAII

This provides our negative determination under the Coastal Zone Management Act (CZMA) for the Hawaii Public-Private Venture (PPV) Housing, Phase 4, Marine Corps Base Hawaii (MCBH), Project.

The project proposes to enter into a PPV agreement to privatize the remaining portion of the MCBH family housing at MCBH Kaneohe Bay on Oahu. The project area includes up to 1,142 family housing units with construction laydown areas, maintenance/warehouse areas, and beach access trails. The housing units are located in 3 housing areas: Mololani (Capehart), Pa Honua 3, and a portion of Ulupau. The MCBH family housing units and ancillary facilities will be owned, operated, managed, and maintained through April 30, 2054 by a PPV entity. The PPV agreement will also include the leasing of land and appurtenances at these locations. See enclosure (1) for the Project Location Map.

A federal consistency determination is not required because the proposed project is on Federal property and is not located within the State's coastal zone as defined by the CZMA. The proposed project would not have reasonably foreseeable direct or indirect effects on any coastal use or resource of the State's coastal zone.

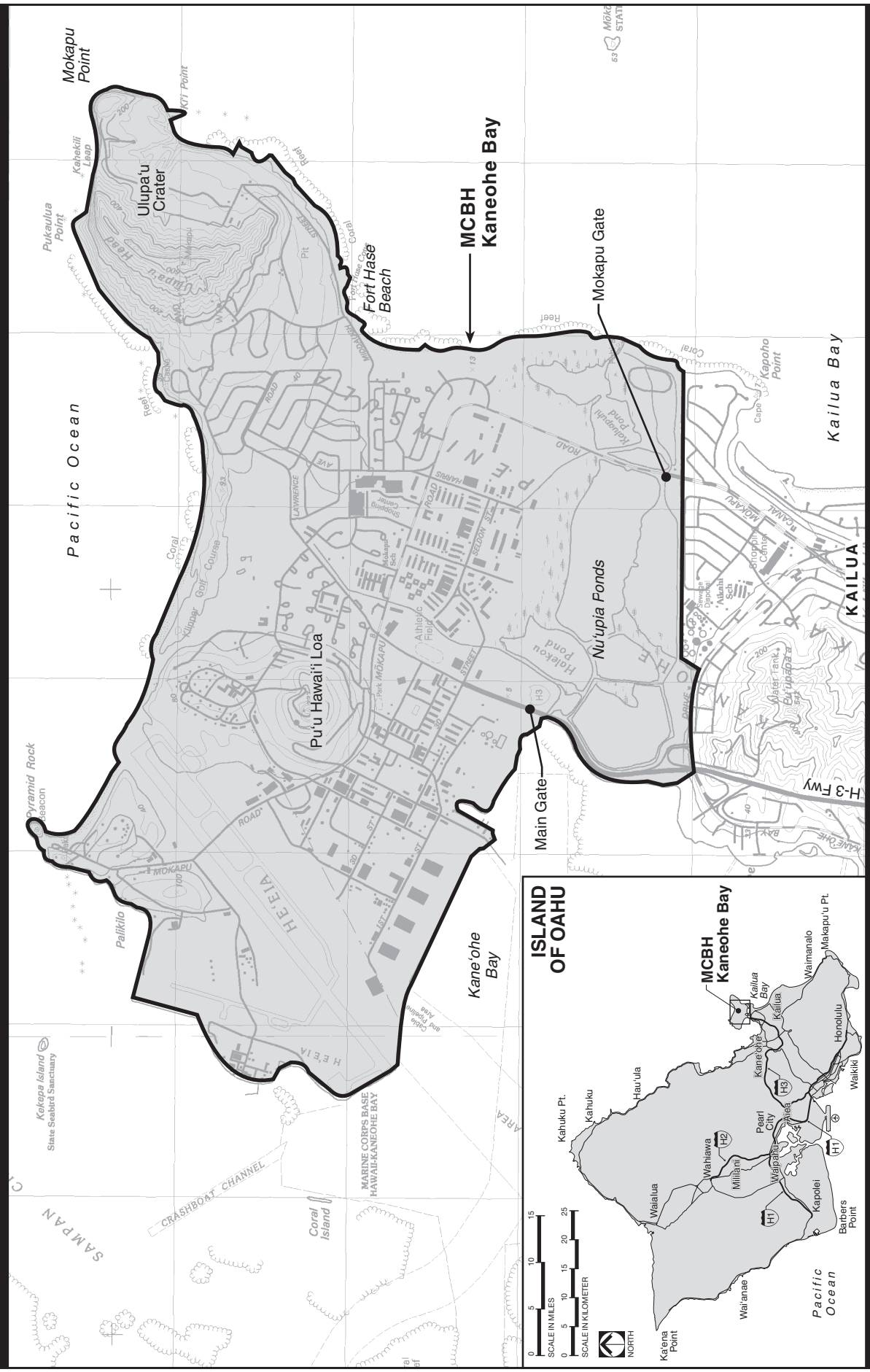
Should you have any questions, please contact (b) (6) at 472-1396, via E-Mail at (b) (6) or via facsimile at 474-5419.

Sincerely,

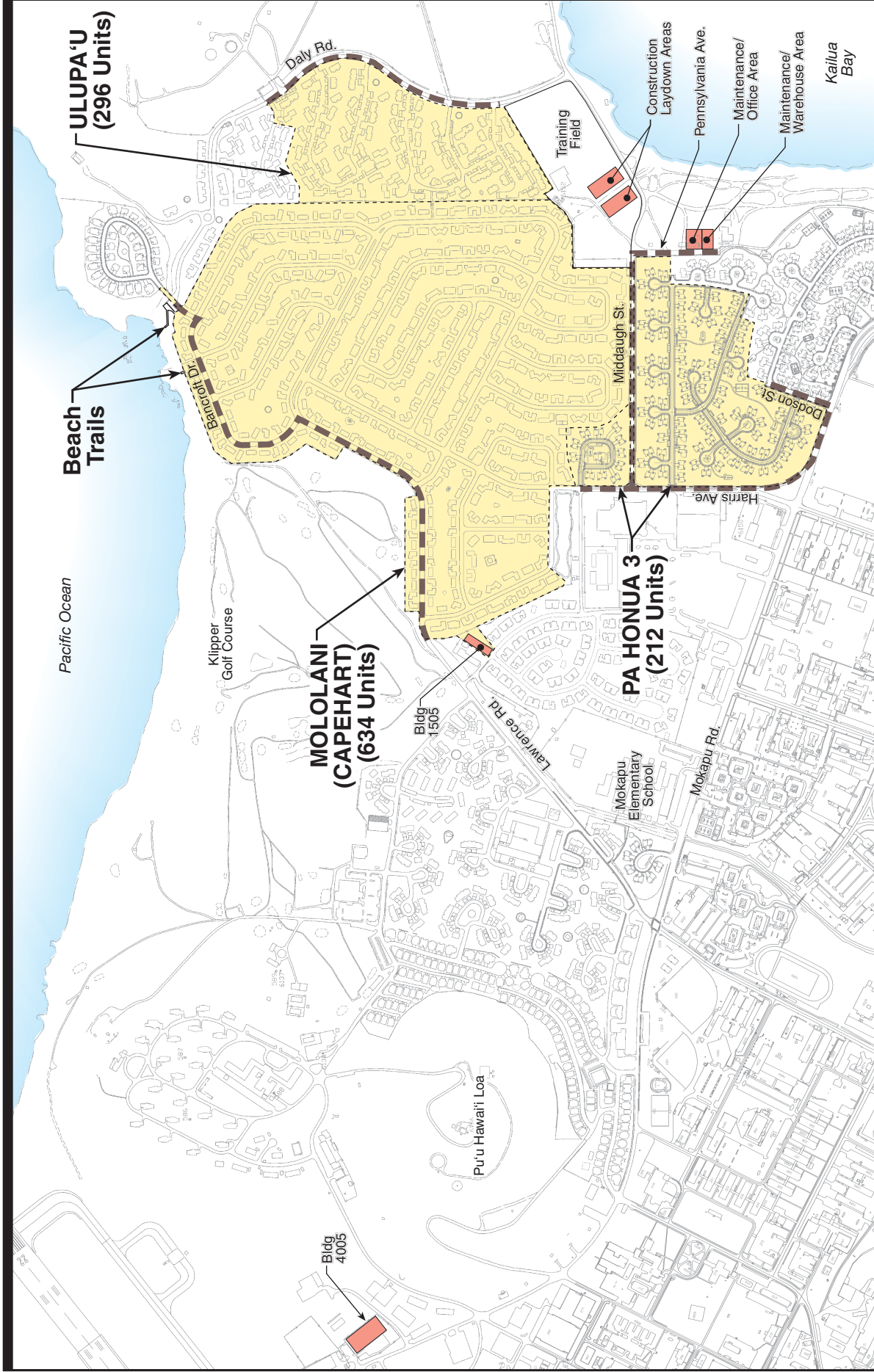
(b) (6)

Business Line Manager
Environmental

Enclosure: Project Location Map



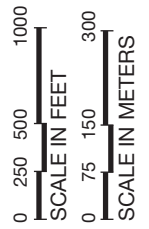
Hawaii Public-Private Venture
Housing, Phase 4
Marine Corps Base Hawaii,
Kaneohe Bay



Maintenance/warehouse areas, construction laydown areas, and areas to be maintained by the PPV entity (training field not shaded)

LEGEND

- Housing areas
- Road alignments to remain unchanged



Hawaii Public-Private Venture
Housing, Phase 4
Marine Corps Base Hawaii
Kaneohe Bay, Housing Areas